

History

Levy 09/626,026

05/23/2005

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(FILE 'HOME' ENTERED AT 13:08:27 ON 23 MAY 2005)

FILE 'HCAPLUS' ENTERED AT 13:08:33 ON 23 MAY 2005

E POLYURETHANES/CT
L1 29470 SEA ABB=ON PLU=ON POLYURETHANES+PFT/CT (L) PREP/RL
E ANTIMICROBIAL AGENTS/CT
L2 283102 SEA ABB=ON PLU=ON ANTIMICROBIAL AGENTS+PFT,NT/CT
E QUATERNARY AMMONIUM COMPOUNDS/CT
L*** DEL 172825 S QUATERNARY AMMONIUM COMPOUNDS+PFT,NT/CT
L3 6277 SEA ABB=ON PLU=ON QUATERNARY AMMONIUM COMPOUNDS+PFT,NT/CT (L) P
REP/RL
L4 121 SEA ABB=ON PLU=ON L1 AND L3
L5 4 SEA ABB=ON PLU=ON L2 AND L4
D QUE L5
D L5 IBIB ABS HITIND HITSTR 1-4

FILE 'REGISTRY' ENTERED AT 13:14:39 ON 23 MAY 2005

L6 STR
L7 6 SEA SSS SAM L6
L8 SCREEN 2040
L9 50 SEA SSS SAM L8 AND L6
L10 19833 SEA SSS FUL L8 AND L6
E POLYURETHANE/CN
E URETHANE/CN
L11 1 SEA ABB=ON PLU=ON URETHANE/CN
D SCA

FILE 'HCAPLUS' ENTERED AT 13:17:35 ON 23 MAY 2005

L12 18575 SEA ABB=ON PLU=ON L10
L13 88 SEA ABB=ON PLU=ON L12 AND L1
L14 1 SEA ABB=ON PLU=ON L13 AND (L2 OR ANTIMICROB? OR MICROB?)
D SCA L14
D QUE L14
D L14 IBIB ABS HITIND HITSTR

FILE 'MEDLINE, EMBASE, BIOSIS' ENTERED AT 13:20:27 ON 23 MAY 2005

FILE 'MEDLINE' ENTERED AT 13:20:51 ON 23 MAY 2005

E POLYURETHANES/CT
E E3+ALL
L15 4469 SEA ABB=ON PLU=ON POLYURETHANES+PFT,NT/CT
L16 6237 SEA ABB=ON PLU=ON L15 OR POLYURETHAN?
E QUATERNARY AMMONIUM COMPOUNDS/CT
L17 4 SEA ABB=ON PLU=ON L16 AND QUATERNARY AMMON?
D TRIAL
E EMBASE
E POLYURETHANE/CT
E E4+ALL
L18 6237 SEA ABB=ON PLU=ON POLYURETHANES+PFT,NT/CT OR POLYURETHAN?
E QUATERNARY AMMON/CT
L19 2767 SEA ABB=ON PLU=ON QUATERNARY AMMON?
L20 4 SEA ABB=ON PLU=ON L18 AND L19

FILE 'BIOSIS' ENTERED AT 13:23:50 ON 23 MAY 2005

E POLYURETHANE/CT
L21 4172 SEA ABB=ON PLU=ON POLYURETHAN?/CT OR POLYURETHAN?

Inventors

Levy 09/626,026

05/23/2005

L3 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:107418 HCAPLUS
DOCUMENT NUMBER: 136:167822
ENTRY DATE: Entered STN: 10 Feb 2002
TITLE: Biocidal polyurethane compositions and use as
antimicrobial coatings
INVENTOR(S): Sengupta, Ashok; Jacobs, Jeffrey L.; Scholz, Matthew
T.; Tautvydas, Kestutis J.
PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA
SOURCE: PCT Int. Appl., 55 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: C08G018-08
SECONDARY: C08G018-12; C08G018-48; C08G018-61; C08G018-66;
C08G018-67; C08G018-81; C09D175-16; C08F290-06
CLASSIFICATION: 35-5 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 42
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002010244	A2	20020207	WO 2001-US21666	20010709 <--
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
EP 1311572	A2	20030521	EP 2001-951005	20010709 <--
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
JP 2004511582	T2	20040415	JP 2002-515971	20010709 <--
PRIORITY APPLN. INFO.:			US 2000-626026	A 20000727 <--
			WO 2001-US21666	W 20010709

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002010244	ICM	C08G018-08
	ICS	C08G018-12; C08G018-48; C08G018-61; C08G018-66; C08G018-67; C08G018-81; C09D175-16; C08F290-06
WO 2002010244	ECLA	C08F290/06E; C08G018/08B3C; C08G018/12+18/28D6; C08G018/48H; C08G018/61; C08G018/66M2A; C08G018/67B4; C08G018/81K3B4; C09D175/16 <--
JP 2004511582	FTERM	4C081/AA01; 4C081/AA04; 4C081/BA14; 4C081/BA15; 4C081/CA062; 4C081/CA081; 4C081/CA161; 4C081/CA181; 4C081/CA191; 4C081/CA211; 4C081/CA271; 4C081/CC02; 4C081/CC03; 4C081/CC05; 4C081/CC07; 4C081/CE01; 4C081/DA02; 4C081/DC03; 4C081/DC12; 4C081/EA05; 4C081/EA06; 4C081/EA11; 4H011/AA02; 4H011/BA01; 4H011/BB04; 4H011/BB06; 4H011/BB19; 4H011/BC19;

4H011/DA07; 4H011/DA15; 4H011/DH05; 4J027/AG02;
 4J027/AG22; 4J027/BA13; 4J027/CD07; 4J027/CD08;
 4J034/BA08; 4J034/CA14; 4J034/CA15; 4J034/CE03;
 4J034/HA01; 4J034/HA07; 4J034/HB08; 4J034/HC03;
 4J034/HC17; 4J034/HC22; 4J034/HC46; 4J034/HC52;
 4J034/HC61; 4J034/HC64; 4J034/HC67; 4J034/HC71;
 4J034/HC73; 4J034/JA42; 4J034/QB19; 4J034/QC08;
 4J034/RA02; 4J034/RA07

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ABSTRACT:

Polymeric comps. that include polyurethane polymers derived from a polyisocyanate compound and a polyactive H compound. The polyurethane compound is at least partially endcapped with a group including ≥ 1 antimicrobial quaternary ammonium compound. The polymeric composition of the present invention is capable of forming a self-supporting film. The polymeric comps. are suitable for coating substrates to effectively kill or prevent the growth of microorganisms such as bacteria, mold, mildew, algae fungi and the like. The polymeric comps. are particularly useful for protecting construction materials used in moist, outdoor environments to prevent discoloration or decay from microorganisms and for surfaces in health care facilities to mitigate the spread of pathogens. A prepolymer made from Desmodur W, Tego HSI 2311 dimethylsiloxane diol, Terathane, Pripol 2033, Priplast 3192, N-methyldiethanolamine, dimethylaminoethyl methacrylate quat, and hydroxyethyl acrylate was chain extended with adipic acid dihydrazide.

SUPPL. TERM: block polyurethane dimethylaminoethyl methacrylate quat pendant; antimicrobial coating block polyurethane acrylic siloxane

INDEX TERM: Polyurethanes, preparation
 ROLE: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (acrylic-polyether-polysiloxane-polyurea-polyurethane-, block, cationic; block polyurethane dispersions and use as antimicrobial coatings)

INDEX TERM: Polyureas
 ROLE: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (acrylic-polyether-polysiloxane-polyurethane-, block, cationic; block polyurethane dispersions and use as antimicrobial coatings)

INDEX TERM: Polysiloxanes, preparation
 ROLE: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (acrylic-polyether-polyurea-polyurethane-, block, cationic; block polyurethane dispersions and use as antimicrobial coatings)

INDEX TERM: Polyethers, preparation
 ROLE: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (acrylic-polysiloxane-polyurea-polyurethane-, block, cationic; block polyurethane dispersions and use as antimicrobial coatings)

INDEX TERM: Antimicrobial agents
 (coatings; block polyurethane dispersions and use as antimicrobial coatings)

INDEX TERM: Quaternary ammonium compounds, preparation
 ROLE: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (coco alkylbis(hydroxyethyl)methyl, ethoxylated, Me

sulfates (salts), reaction products with polyurethane prepolymer; block polyurethane dispersions and use as antimicrobial coatings)

INDEX TERM: Polyurethanes, preparation
 ROLE: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polyester-polyurea-, block, cationic; block polyurethane dispersions and use as antimicrobial coatings)

INDEX TERM: Polyureas
 ROLE: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polyester-polyurethane-, block, cationic; block polyurethane dispersions and use as antimicrobial coatings)

INDEX TERM: Quaternary ammonium compounds, preparation
 ROLE: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polymers; block polyurethane dispersions and use as antimicrobial coatings)

INDEX TERM: Polyesters, preparation
 ROLE: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polyurea-polyurethane-, block, cationic; block polyurethane dispersions and use as antimicrobial coatings)

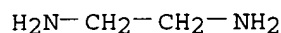
INDEX TERM: Polyoxyalkylenes, preparation
 ROLE: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polyurethane prepolymer, reaction products with Variquat K 1215; block polyurethane dispersions and use as antimicrobial coatings)

INDEX TERM: 107-15-3DP, Ethylenediamine, polyurethane prepolymer, reaction products with Variquat K 1215
 818-61-1DP, reaction products with polyurethane prepolymer and biocide quat isocyanatoethyl methacrylate adduct 4098-71-9DP, IPDI, polyurethane prepolymer, reaction products with Variquat K 1215 25322-68-3DP, Carbowax 1000, polyurethane prepolymer, reaction products with Variquat K 1215 30674-80-7DP, biocide quat derivative, reaction products with polyurethane prepolymer 82985-35-1DP, A 1170, endcapped block polyurethane 396131-64-9DP, reaction products with stearylamidopropyldimethylamine monol quat 396131-64-9P 396131-65-0DP, reaction products with stearylamidopropyldimethylamine salt with 2-bromoethanol 396131-66-1P 396131-67-2P 396131-68-3DP, hydroxyethyl acrylate derivative, reaction products with biocide quat isocyanatoethyl methacrylate adduct 396131-69-4DP, reaction products with A 1170 396134-91-1DP, reaction products with A 1170 396134-92-2DP, reaction products with A 1170
 ROLE: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (block polyurethane dispersions and use as antimicrobial coatings)

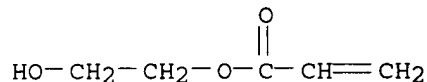
IT 107-15-3DP, Ethylenediamine, polyurethane prepolymer, reaction products with Variquat K 1215 818-61-1DP, reaction products with

polyurethane prepolymer and biocide quat isocyanatoethyl methacrylate adduct 4098-71-9DP, IPDI, polyurethane prepolymer, reaction products with Variquat K 1215 25322-68-3DP, Carbowax 1000, polyurethane prepolymer, reaction products with Variquat K 1215 30674-80-7DP, biocide quat derivative, reaction products with polyurethane prepolymer 82985-35-1DP, A 1170, endcapped block polyurethane 396131-64-9DP, reaction products with stearylamidopropyldimethylamine monol quat 396131-64-9P 396131-65-0DP, reaction products with stearylamidopropyldimethylamine salt with 2-bromoethanol 396131-66-1P 396131-67-2P 396131-68-3DP, hydroxyethyl acrylate derivative, reaction products with biocide quat isocyanatoethyl methacrylate adduct 396131-69-4DP, reaction products with A 1170 396134-91-1DP, reaction products with A 1170 396134-92-2DP, reaction products with A 1170
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (block polyurethane dispersions and use as antimicrobial coatings)

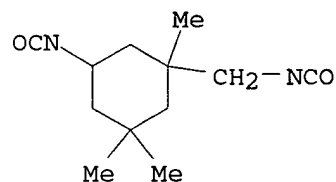
RN 107-15-3 HCAPLUS
 CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)



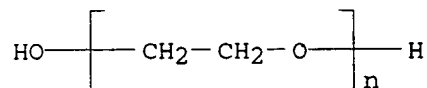
RN 818-61-1 HCAPLUS
 CN 2-Propenoic acid, 2-hydroxyethyl ester (9CI) (CA INDEX NAME)



RN 4098-71-9 HCAPLUS
 CN Cyclohexane, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethyl- (9CI) (CA INDEX NAME)

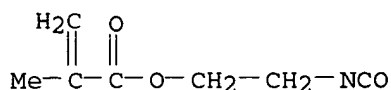


RN 25322-68-3 HCAPLUS
 CN Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy- (9CI) (CA INDEX NAME)



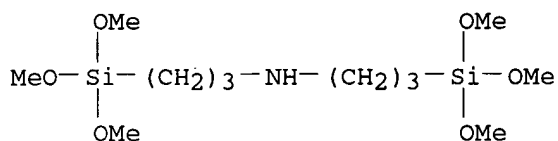
RN 30674-80-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-isocyanatoethyl ester (9CI) (CA INDEX NAME)



RN 82985-35-1 HCAPLUS

CN 1-Propanamine, 3-(trimethoxysilyl)-N-[3-(trimethoxysilyl)propyl]- (9CI)
(CA INDEX NAME)



RN 396131-64-9 HCAPLUS

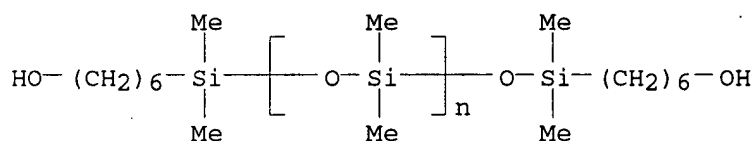
CN 1-Hexadecanaminium, N,N-dimethyl-N-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, bromide, polymer with Desmodur W, hexanedioic acid dihydrazide, α -hydro- ω -hydroxypoly(oxy-1,4-butanediyl), 2-hydroxyethyl 2-propenoate, α -[(6-hydroxyhexyl)dimethylsilyl]- ω -[[[(6-hydroxyhexyl)dimethylsilyl]oxy]poly[oxy(dimethylsilylene)]], 2,2'-(methylimino)bis[ethanol], Priplast 3192 and Pripol 2033, block (9CI)
(CA INDEX NAME)

CM 1

CRN 190339-40-3

CMF (C2 H6 O Si)_n C16 H38 O3 Si2

CCI PMS



CM 2

CRN 158516-85-9

CMF Unspecified

CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 3

CRN 157630-15-4

CMF Unspecified

CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 4

CRN 79103-62-1

CMF Unspecified

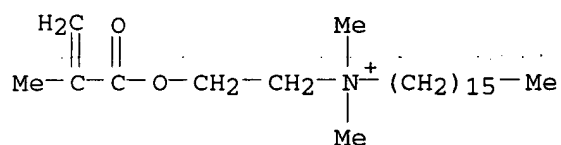
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 5

CRN 58710-34-2

CMF C24 H48 N O2 . Br

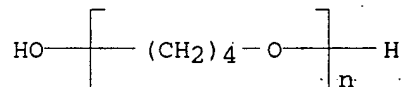


CM 6

CRN 25190-06-1

CMF (C4 H8 O)_n H2 O

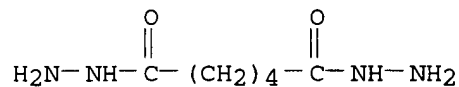
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CM 7

CRN 1071-93-8

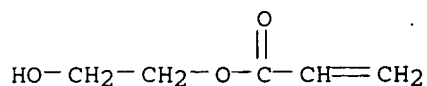
CMF C6 H14 N4 O2



CM 8

CRN 818-61-1

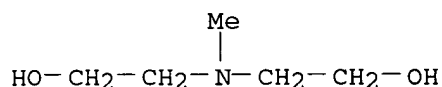
CMF C5 H8 O3



CM 9

CRN 105-59-9

CMF C5 H13 N O2



RN 396131-64-9 HCAPLUS

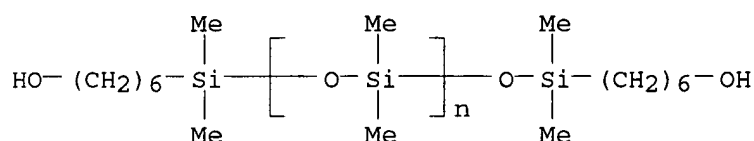
CN 1-Hexadecanaminium, N,N-dimethyl-N-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, bromide, polymer with Desmodur W, hexanedioic acid dihydrazide, α -hydro- ω -hydroxypoly(oxy-1,4-butanediyl), 2-hydroxyethyl 2-propenoate, α -[(6-hydroxyhexyl)dimethylsilyl]- ω -[[[(6-hydroxyhexyl)dimethylsilyl]oxy]poly[oxy(dimethylsilylene)]], 2,2'-(methylimino)bis[ethanol], Priplast 3192 and Pripol 2033, block (9CI)
(CA INDEX NAME)

CM 1

CRN 190339-40-3

CMF (C2 H6 O Si)_n C16 H38 O3 Si2

CCI PMS



CM 2

CRN 158516-85-9

CMF Unspecified

CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 3

CRN 157630-15-4

CMF Unspecified

CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

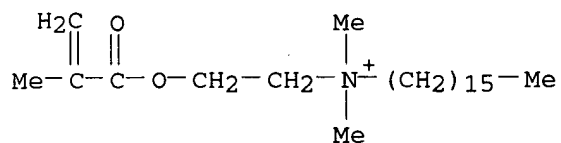
CM 4

CRN 79103-62-1
 CMF Unspecified
 CCI MAN

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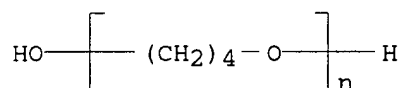
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CRN 58710-34-2
 CMF C24 H48 N O2 . Br



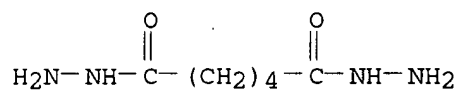
CM 6

CRN 25190-06-1
 CMF (C4 H8 O)n H2 O
 CCI PMS



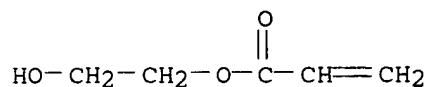
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CRN 1071-93-8
 CMF C6 H14 N4 O2



CM 8

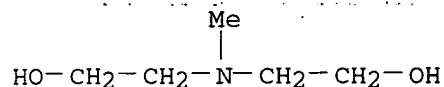
CRN 818-61-1
 CMF C5 H8 O3



CM 9

CRN 105-59-9

CMF C5 H13 N O2



RN 396131-65-0 HCAPLUS

CN 1,2-Benzenedicarboxylic acid, polymer with Desmodur W, hexanedioic acid dihydrazide, 1,6-hexanediol, 2,2'-(methylimino)bis[ethanol], Pripol 1009 and Pripol 2033, block (9CI) (CA INDEX NAME)

CM 1

CRN 158516-85-9

CMF Unspecified

CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 127290-22-6

CMF Unspecified

CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 3

CRN 79103-62-1

CMF Unspecified

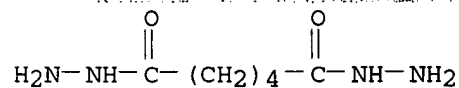
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 4

CRN 1071-93-8

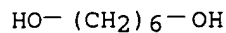
CMF C6 H14 N4 O2



CM 5

CRN 629-11-8

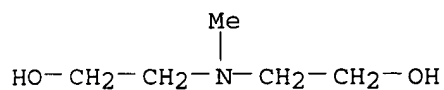
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CM 6

CRN 105-59-9

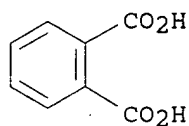
CMF C5 H13 N O2



CM 7

CRN 88-99-3

CMF C8 H6 O4



RN 396131-66-1 HCAPLUS

CN 1-Octanaminium, N,N-dimethyl-N-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, bromide, polymer with 1,2-benzenedicarboxylic acid, Desmodur W, hexanedioic acid dihydrazide, 1,6-hexanediol, 2-hydroxyethyl 2-propenoate, 2,2'-(methylimino)bis[ethanol], Pripol 1009 and Pripol 2033, block (9CI) (CA INDEX NAME)

CM 1

CRN 158516-85-9

CMF Unspecified

CCI MAN

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CM 2

CRN 127290-22-6

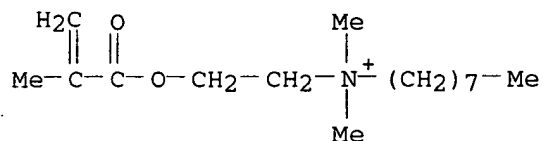
CMF Unspecified

CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 3

CRN 96526-33-9
CMF C16 H32 N O2 . Br



● Br⁻

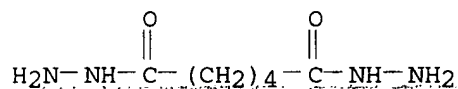
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CRN 79103-62-1
CMF Unspecified
CCI MAN

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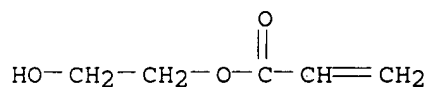
CM 5

CRN 1071-93-8
CMF C6 H14 N4 O2



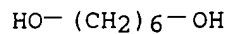
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CRN 818-61-1
CMF C5 H8 O3



CM 7

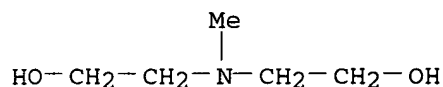
CRN 629-11-8
CMF C6 H14 O2



CM 8

CRN 105-59-9

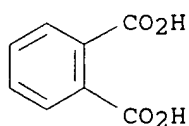
CMF C5 H13 N O2



CM 9

CRN 88-99-3

CMF C8 H6 O4



RN 396131-67-2 HCAPLUS

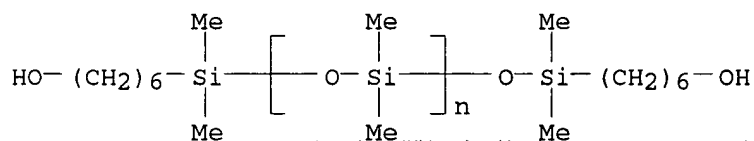
CN 1-Hexadecanaminium, N,N-dimethyl-N-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, bromide, polymer with Desmodur W, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 2-hydroxyethyl 2-propenoate, α -[(6-hydroxyhexyl)dimethylsilyl]- ω -[[6-hydroxyhexyl)dimethylsilyl]oxy]poly[oxy(dimethylsilylene)] and Priplast 3192, block (9CI) (CA INDEX NAME)

CM 1

CRN 190339-40-3

CMF (C2 H6 O Si)_n C16 H38 O3 Si2

CCI PMS



CM 2

CRN 157630-15-4

CMF Unspecified

CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

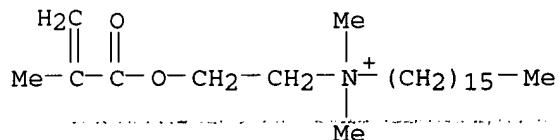
CM 3

CRN 79103-62-1
 CMF Unspecified
 CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

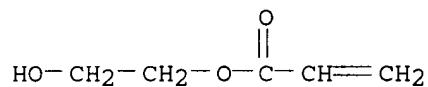
CM 4

CRN 58710-34-2
 CMF C24 H48 N O2 . Br



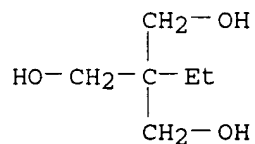
CM 5

CRN 818-61-1
 CMF C5 H8 O3



CM 6

CRN 77-99-6
 CMF C6 H14 O3



RN 396131-68-3 HCAPLUS
 CN Hexanedioic acid, dihydrazide, polymer with Desmodur W,
 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 2,2'-(methylimino)bis[ethanol],
 Priplast 3192 and Tone 0210, block (9CI) (CA INDEX NAME)

CM 1

CRN 157630-15-4
 CMF Unspecified

CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 92680-67-6

CMF Unspecified

CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 3

CRN 79103-62-1

CMF Unspecified

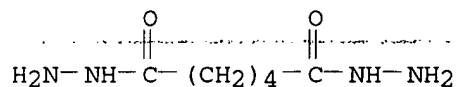
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 4

CRN 1071-93-8

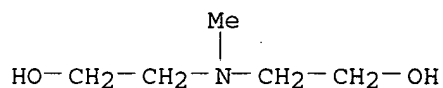
CMF C6 H14 N4 O2



CM 5

CRN 105-59-9

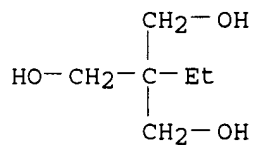
CMF C5 H13 N O2



CM 6

CRN 77-99-6

CMF C6 H14 O3



RN 396131-69-4 HCAPLUS

CN 1-Hexadecanaminium, N,N-dimethyl-N-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, bromide, polymer with 1,2-benzenedicarboxylic acid, Desmodur W, 2,2-dimethyl-1,3-propanediol, 1,2-ethanediamine, 1,6-hexanediol, 2,2'-(methylimino)bis[ethanol] and PC 1122, block (9CI) (CA INDEX NAME)

CM 1

CRN 238093-85-1

CMF Unspecified

CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 79103-62-1

CMF Unspecified

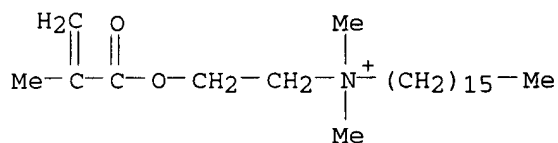
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 3

CRN 58710-34-2

CMF C24 H48 N O2 . Br

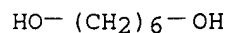


● Br⁻

CM 4

CRN 629-11-8

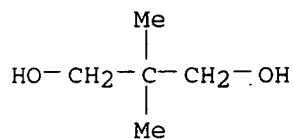
CMF C6 H14 O2



CM 5

CRN 126-30-7

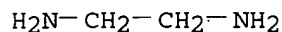
CMF C5 H12 O2



CM 6

CRN 107-15-3

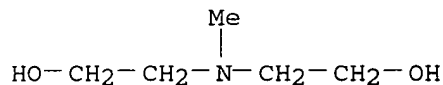
CMF C2 H8 N2



CM 7

CRN 105-59-9

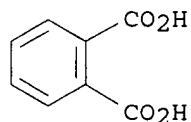
CMF C5 H13 N O2



CM 8

CRN 88-99-3

CMF C8 H6 O4



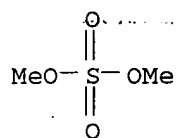
RN 396134-91-1 HCAPLUS

CN 1-Hexadecanaminium, N,N-dimethyl-N-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, bromide, polymer with Desmodur W, 1,2-ethanediamine, 2,2'-(methyylimino)bis[ethanol], α,α' -(oxydi-2,1-ethanediyl)bis[ω -hydroxypoly[oxy(1-oxo-1,6-hexanediyl)]]], 1,2,3-propanetriol mono(2-methyl-2-propenoate) and Tone 0210, block, compd. with dimethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 77-78-1

CMF C2 H6 O4 S



CM 2

CRN 396134-90-0

CMF (C24 H48 N O2 . C7 H12 O4 . (C6 H10 O2)n (C6 H10 O2)n C4 H10 O3 . C5 H13 N O2 . C2 H8 N2 . Br . Unspecified . Unspecified)x

CCI PMS

CM 3

CRN 92680-67-6

CMF Unspecified

CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 4

CRN 79103-62-1

CMF Unspecified

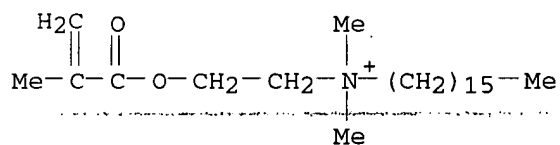
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 5

CRN 58710-34-2

CMF C24 H48 N O2 . Br

● Br⁻

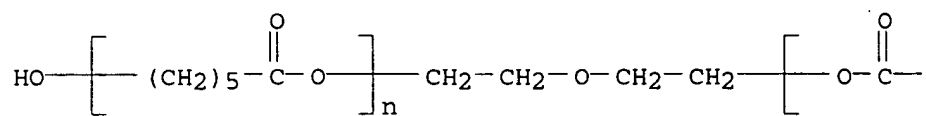
CM 6

CRN 50327-24-7

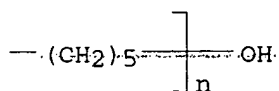
CMF (C6 H10 O2)n (C6 H10 O2)n C4 H10 O3

CCI PMS

PAGE 1-A



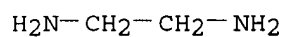
PAGE 1-B



CM 7

CRN 107-15-3

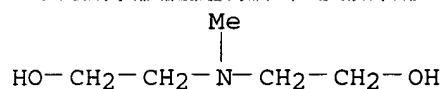
CMF C2 H8 N2



CM 8

CRN 105-59-9

CMF C5 H13 N O2



CM 9

CRN 50853-28-6

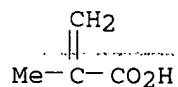
CMF C7 H12 O4

CCI IDS

CM 10

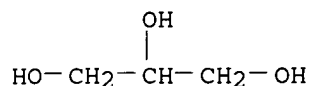
CRN 79-41-4

CMF C4 H6 O2



CM 11

CRN 56-81-5
CMF C3 H8 O3



RN 396134-92-2 HCAPLUS
CN 1-Hexadecanaminium, N,N-dimethyl-N-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, bromide, polymer with 1,2-benzenedicarboxylic acid, Desmodur W, 1,2-ethanediamine, 1,6-hexanediol, 2,2'-(methylimino)bis[ethanol], α,α' -(oxydi-2,1-ethanediyl)bis[ω -hydroxypoly[oxy(1-oxo-1,6-hexanediyl)]] and 1,2,3-propanetriol mono(2-methyl-2-propenoate), block (9CI) (CA INDEX NAME)

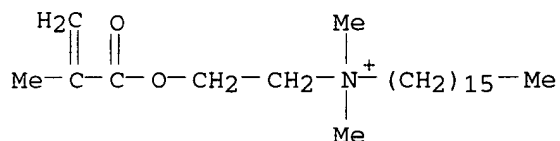
CM 1

CRN 79103-62-1
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 58710-34-2
CMF C24 H48 N O2 . Br

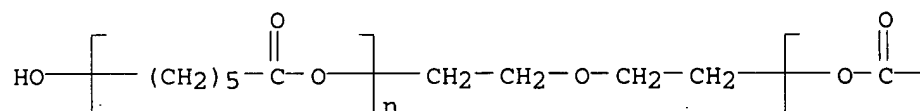


● Br⁻

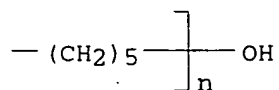
CM 3

CRN 50327-24-7
CMF (C6 H10 O2)_n (C6 H10 O2)_n C4 H10 O3
CCI PMS

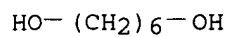
PAGE 1-A



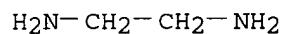
PAGE 1-B



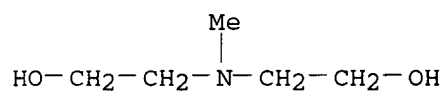
CM 4

CRN 629-11-8
CMF C6 H14 O2

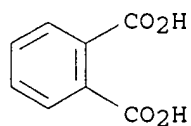
CM 5

CRN 107-15-3
CMF C2 H8 N2

CM 6

CRN 105-59-9
CMF C5 H13 N O2

CM 7

CRN 88-99-3
CMF C8 H6 O4

CM 8

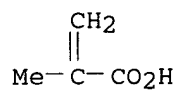
CRN 50853-28-6
CMF C7 H12 O4

CCI IDS

CM 9

CRN 79-41-4

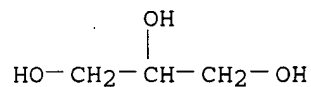
CMF C4 H6 O2



CM 10

CRN 56-81-5

CMF C3 H8 O3



=> d que 15

L1 29470 SEA FILE=HCAPLUS ABB=ON PLU=ON POLYURETHANES+PFT/CT(L)PREP/RL

L2 283102 SEA FILE=HCAPLUS ABB=ON PLU=ON ANTIMICROBIAL AGENTS+PFT,NT/CT

L3 6277 SEA FILE=HCAPLUS ABB=ON PLU=ON QUATERNARY AMMONIUM COMPOUNDS+
PFT,NT/CT(L)PREP/RL

L4 121 SEA FILE=HCAPLUS ABB=ON PLU=ON L1 AND L3

L5 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L2 AND L4

=> d 15 ibib abs hitind hitstr 1-4

L5 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:73629 HCAPLUS

DOCUMENT NUMBER: 140:133893

TITLE: Polymer-based antimicrobial compositions suitable for medical goods

INVENTOR(S): Kubota, Manabu; Oshima, Shoichi; Shiba, Toru

PATENT ASSIGNEE(S): Create Medics Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004024418	A2	20040129	JP 2002-183174	20020624
PRIORITY APPLN. INFO.:			JP 2002-183174	20020624

AB The compns. contain polymers having tertiary amino groups and vinyl copolymers having halomethylated aromatic groups and phosphonium groups. Pellethane (polyurethane sheet) was immersed in a THF solution containing a 7:3 mixture of a polyurethane (4,4'-diphenylmethane diisocyanate-polytetramethylene glycol-N-methyldiethanolamine-1,4-butanediol copolymer) and a vinyl copolymer [chloromethylstyrene-methoxypolyethylene glycol methacrylate-tri-n-octyl(4-vinylbenzyl)phosphonium chloride copolymer], air-dried, and heated at 110° for 1 h to give a coated sheet, which effectively inhibited Escherichia coli, Pseudomonas aeruginosa, and Staphylococcus epidermidis.

IC ICM A61L027-00
ICS A61L015-16; A61L029-00; A61L031-00

CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 37, 38, 42

IT **Antibacterial agents**
Antimicrobial agents
(polymer-based antimicrobial compns. suitable for medical goods)

IT Phosphonium compounds
Quaternary ammonium compounds, biological studies
RL: BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; RACT (Reactant or reagent); USES (Uses)
(polymers containing; polymer-based antimicrobial compns. suitable for medical goods)

IT **Polyurethanes, biological studies**

RL: BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; RACT (Reactant or reagent); USES (Uses)
(polyoxyalkylene-, block; polymer-based antimicrobial compns. suitable for medical goods)

L5 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:107418 HCAPLUS

DOCUMENT NUMBER: 136:167822

TITLE: Biocidal polyurethane compositions and use as antimicrobial coatings

INVENTOR(S): Sengupta, Ashok; Jacobs, Jeffrey L.; Scholz, Matthew T.; Tautvydas, Kestutis J.

PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA

SOURCE: PCT Int. Appl., 55 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002010244	A2	20020207	WO 2001-US21666	20010709
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1311572	A2	20030521	EP 2001-951005	20010709
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004511582	T2	20040415	JP 2002-515971	20010709
PRIORITY APPLN. INFO.: US 2000-626026 A 20000727				
WO 2001-US21666 W 20010709				

AB Polymeric compns. that include polyurethane polymers derived from a polyisocyanate compound and a polyactive H compound. The polyurethane compound is at least partially endcapped with a group including ≥ 1 antimicrobial quaternary ammonium compound. The polymeric composition of the present invention is capable of forming a self-supporting film. The polymeric compns. are suitable for coating substrates to effectively kill or prevent the growth of microorganisms such as bacteria, mold, mildew, algae fungi and the like. The polymeric compns. are particularly useful for protecting construction materials used in moist, outdoor environments to prevent discoloration or decay from microorganisms and for surfaces in health care facilities to mitigate the spread of pathogens. A prepolymer made from Desmodur W, Tego HSI 2311 dimethylsiloxane diol, Terathane, Pripol 2033, Priplast 3192, N-methyldiethanolamine, dimethylaminoethyl methacrylate quat, and hydroxyethyl acrylate was chain extended with adipic acid dihydrazide.

IC ICM C08G018-08

ICS C08G018-12; C08G018-48; C08G018-61; C08G018-66; C08G018-67;

- C08G018-81; C09D175-16; C08F290-06
- CC 35-5 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 42
- IT **Polyurethanes, preparation**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; **USES (Uses)**
(acrylic-polyether-polysiloxane-polyurea-polyurethane-, block, cationic; block polyurethane dispersions and use as antimicrobial coatings)
- IT **Antimicrobial agents**
(coatings; block polyurethane dispersions and use as antimicrobial coatings)
- IT **Quaternary ammonium compounds, preparation**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; **USES (Uses)**
(coco alkylbis(hydroxyethyl)methyl, ethoxylated, Me sulfates (salts), reaction products with polyurethane prepolymer; block polyurethane dispersions and use as antimicrobial coatings)
- IT **Polyurethanes, preparation**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; **USES (Uses)**
(polyester-polyurea-, block, cationic; block polyurethane dispersions and use as antimicrobial coatings)
- IT **Quaternary ammonium compounds, preparation**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; **USES (Uses)**
(polymers; block polyurethane dispersions and use as antimicrobial coatings)
- L5 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2005 ACS on STN
- ACCESSION NUMBER: 2000:431000 HCAPLUS
- DOCUMENT NUMBER: 133:164620
- TITLE: Synthesis, characterization and biocidal properties of epoxy resins containing quaternary ammonium salts
- AUTHOR(S): Destais, Nadege; Ades, Dominique; Sauvet, Georges
- CORPORATE SOURCE: Laboratoire de Recherches sur les Macromolecules, Villetaneuse, 93430, Fr.
- SOURCE: Polymer Bulletin (Berlin) (2000), 44(4), 401-408
CODEN: POBUDR; ISSN: 0170-0839
- PUBLISHER: Springer-Verlag
- DOCUMENT TYPE: Journal
- LANGUAGE: English
- AB Quaternary ammonium salts (QAS) were covalently-bound to epoxy resins of different DP in two steps: addition of a N,N-dialkylaminoethanethiol followed by the quaternization of the tertiary amine by an alkyl bromide (C8H17Br to C14H29Br). The products were characterized by 1H NMR spectroscopy. The QAS-containing oligomers (with optional chain extender) were used as polyols to prepare polyurethane (PU) films by reaction with a triisocyanate (Tolonate HDB). The films show a good bactericidal activity against Escherichia coli, which is preserved after 6 mo of immersion in water.
- CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 10, 35, 38
- IT **Polyurethanes, preparation**
Polyurethanes, preparation
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); TEM (Technical or engineered material use); BIOL (Biological study); **PREP (Preparation)**; **USES (Uses)**

(epoxy; in synthesis, characterization and biocidal properties of epoxy resins containing quaternary ammonium salts)

IT **Quaternary ammonium compounds, preparation**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); TEM (Technical or engineered material use); BIOL (Biological study); **PREP**

(**Preparation**); USES (Uses)

(polymers; in synthesis, characterization and biocidal properties of epoxy resins containing quaternary ammonium salts)

IT **Antibacterial agents**

(synthesis, characterization and biocidal properties of epoxy resins containing quaternary ammonium salts)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:345791 HCAPLUS

DOCUMENT NUMBER: 131:32776

TITLE: Antibacterial polyurethane resins with excellent laundry resistance and their manufacture

INVENTOR(S): Sakura, Michikazu; Omoto, Mitsuru; Kondo, Satoshi

PATENT ASSIGNEE(S): Inoac Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11147927	A2	19990602	JP 1997-314695	19971117
PRIORITY APPLN. INFO.:			JP 1997-314695	19971117

OTHER SOURCE(S): MARPAT 131:32776

AB The resins, which may be open-cell foams, are reaction products of isocyanates and active-H-containing components which contain ≥ 1 -active-H-containing antibacterial ammonium salts [represented by (NR₃R'H)+A⁻ (R = H, hydrocarbyl; R'H = atomic group having active H; A⁻ = anion)]. The manufacture of the resins is also claimed. The resin matrixes may contain metal-ion-supporting porous inorg. fillers. Thus, a polyether-polyurethane foam manufactured from GP 3000 (polypropylene glycol glycerol ether) 100, water 4.3, an amine catalyst 0.3, a foam stabilizer (SH 192) 1.0, CH₂Cl₂ 2, stannous octoate 0.3, T 80 (2,4- and 2,6-TDI) 53.7, and Ethoquad O/12 (OH-containing antibacterial ammonium salt) 1.2 parts, showed d. 22.0 kg/m³, high antibacterial activity against Staphylococcus aureus after 400-time wash, compression strain (JIS K 6401) 4.9%, and less yellowing in the peripheral regions compared with the center region.

IC ICM C08G018-32

ICS C08G018-32; A01N033-12; A01N059-16; A01N061-00; C08J009-02;

C08K003-34; C08K007-22; C08K009-02; C08L075-04; C08G101-00

CC 38-3 (Plastics Fabrication and Uses)

IT **Quaternary ammonium compounds, uses**

RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)

(active-H-containing, reaction products with diisocyanates and polyols, cellular; antibacterial polyurethane foams containing chemical-bonded

ammonium

bactericides with good laundry resistance)

IT **Antibacterial agents**

(antibacterial polyurethane foams containing chemical-bonded ammonium bactericides with good laundry resistance)

IT **Polyurethanes, uses**

RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); **PREP (Preparation)**; **USES (Uses)**

(polyester-, cellular; antibacterial polyurethane foams containing chemical-bonded ammonium bactericides with good laundry resistance)

IT **Polyurethanes, uses**

RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); **PREP (Preparation)**; **USES (Uses)**

(polyether-, cellular; antibacterial polyurethane foams containing chemical-bonded ammonium bactericides with good laundry resistance)

=> fil medline

FILE 'MEDLINE' ENTERED AT 13:26:34 ON 23 MAY 2005

FILE LAST UPDATED: 21 MAY 2005 (20050521/UP). FILE COVERS 1950 TO DATE.

On December 19, 2004, the 2005 MeSH terms were loaded.

The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow prompt (=>). See also:

<http://www.nlm.nih.gov/mesh/>
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d que 117

L15	4469	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	POLYURETHANES+PFT,NT/CT
L16	6237	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	L15 OR POLYURETHAN?
L17	4	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	L16 AND QUATERNARY AMMON?

=> fil embase

FILE 'EMBASE' ENTERED AT 13:26:43 ON 23 MAY 2005

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FILE COVERS 1974 TO 19 May 2005 (20050519/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d que 120

L18	6237	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	POLYURETHANES+PFT,NT/CT OR POLYURETHAN?
L19	2767	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	QUATERNARY AMMON?
L20	4	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	L18 AND L19

=> fil biosis

FILE 'BIOSIS' ENTERED AT 13:26:51 ON 23 MAY 2005

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FILE COVERS 1969 TO DATE.

CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 18 May 2005 (20050518/ED)

FILE RELOADED: 19 October 2003.

=> d que 122

L21 4172 SEA FILE=BIOSIS ABB=ON PLU=ON POLYURETHAN?/CT OR POLYURETHAN?
L22 4 SEA FILE=BIOSIS ABB=ON PLU=ON L21 AND QUATERNARY AMMON?

=> fil wpix

FILE 'WPIX' ENTERED AT 13:26:58 ON 23 MAY 2005
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FILE LAST UPDATED: 20 MAY 2005 <20050520/UP>
MOST RECENT DERWENT UPDATE: 200532 <200532/DW>
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PLEASE CHECK:
<http://thomsonderwent.com/support/dwpioref/reftools/classification/code-revision/>
FOR DETAILS. <<<

=> d que l26

L23 116206 SEA FILE=WPIX ABB=ON PLU=ON POLYURETHAN?
L24 25768 SEA FILE=WPIX ABB=ON PLU=ON QUATERNARY AMMON?
L25 834 SEA FILE=WPIX ABB=ON PLU=ON L23 AND L24
L26 47 SEA FILE=WPIX ABB=ON PLU=ON L25 AND ?MICROB?

=> fil stng

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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: May 20, 2005 (20050520/UP).

=> dup rem l17 l20 l22 l26

FILE 'MEDLINE' ENTERED AT 13:27:13 ON 23 MAY 2005

FILE 'BIOSIS' ENTERED AT 13:27:13 ON 23 MAY 2005
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PROCESSING COMPLETED FOR L17

PROCESSING COMPLETED FOR L20

PROCESSING COMPLETED FOR L22

PROCESSING COMPLETED FOR L26

L27 52 DUP REM L17 L20 L22 L26 (7 DUPLICATES REMOVED)

ANSWERS '1-4' FROM FILE MEDLINE

ANSWER '5' FROM FILE BIOSIS

ANSWERS '6-52' FROM FILE WPIX

=> d 127 bib ab 1-52

L27 ANSWER 1 OF 52 MEDLINE on STN DUPLICATE 1
AN 94283409 MEDLINE
DN PubMed ID: 8013481
TI Modification of central venous catheter polymers to prevent in vitro
microbial colonisation.
AU Tebbs S E; Elliott T S
CS Department of Clinical Microbiology, Queen Elizabeth Hospital, Birmingham,
UK.
SO European journal of clinical microbiology & infectious diseases : official
publication of the European Society of Clinical Microbiology, (1994 Feb)
13 (2) 111-7.
Journal code: 8804297. ISSN: 0934-9723.
CY GERMANY: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199407
ED Entered STN: 19940810
Last Updated on STN: 19940810
Entered Medline: 19940725
AB The efficacy of an antimicrobial catheter for the prevention of bacterial
colonisation was investigated. The catheter was hydrophilic coated
(Hydrocath) and impregnated with the **quaternary ammonium**
antimicrobial agent, benzalkonium chloride (BZC). Microbial colonisation
of this central venous catheter was compared to that of
polyurethane catheters with or without a hydrophilic coating.
Adherence of five strains of Staphylococcus epidermidis to the three
catheter types was determined with a microbial colonisation model.
Adherence of three strains of Staphylococcus epidermidis to Hydrocath
catheters was significantly reduced in comparison to **polyurethane**
catheters (p < 0.01). BZC-impregnated Hydrocath catheters prevented
bacterial colonisation of both the internal and external catheter surfaces
(p < 0.01). These results were confirmed by scanning electron microscopy.
The findings demonstrate that hydrophilic-coated Hydrocath catheters can
inhibit bacterial adherence in vitro. Bacterial colonisation was further
restricted by the addition of BZC to these coated catheters.

L27 ANSWER 2 OF 52 MEDLINE on STN DUPLICATE 2
AN 92338266 MEDLINE
DN PubMed ID: 1633217
TI Synthesis and physicochemical characterization of a hydrophilic
polyurethane able to bind heparin.
AU Marconi W; Martinelli A; Piozzi A; Zane D
CS Department of Chemistry, University of Rome La Sapienza, Italy.
SO Biomaterials, (1992) 13 (7) 432-8.
Journal code: 8100316. ISSN: 0142-9612.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English

FS Priority Journals
EM 199208
ED Entered STN: 19920911
Last Updated on STN: 19920911
Entered Medline: 19920826
AB The synthesis of a new segmented **polyurethane** containing **quaternary ammonium** groups in the side-chain is reported. The quaternization was carried out both on the polymer dissolved in an organic solvent and on polymer films. Polymeric films quaternized by both techniques were heparinized. The amount of bonded heparin, determined by spectrophotometry, was remarkably higher than previously described. Polymer quaternized in solution bonded more heparin than that heparinized directly on film. In vitro evaluations of antithrombogenicity by activated partial thromboplastin time (APTT) carried out on the films confirmed these data. The polymers were also characterized by chemical, i.r., n.m.r., differential scanning calorimetry and viscometric techniques.

L27 ANSWER 3 OF 52 MEDLINE on STN DUPLICATE 3
AN 87008654 MEDLINE
DN PubMed ID: 3760001
TI Synthesis and antithrombogenicity of polyetherurethaneurea containing **quaternary ammonium** groups in the side chains and of the polymer/heparin complex.
AU Ito Y; Sisido M; Imanishi Y
SO Journal of biomedical materials research, (1986 Sep) 20 (7) 1017-33.
Journal code: 0112726. ISSN: 0021-9304.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198611
ED Entered STN: 19900302
Last Updated on STN: 19900302
Entered Medline: 19861107
AB Novel polyetherurethaneureas containing tertiary amino groups in the side chains (PAEUU) were synthesized, quaternized with different alkyl halides (Q-PAEUU), and heparinized (H-PAEUU). The antithrombogenicity of PAEUU in vitro was improved by quaternization, and further by heparinization. The excellent antithrombogenicity of H-PAEUU was controlled by the kind of quaternizing agent through the polar effect of quaternizing agent on the water content and through the steric effect of quaternizing agent on the heparin content of H-PAEUU. The antithrombogenicity of H-PAEUU was found to be affected by the water content more strongly than by the heparin content. H-PAEUUs containing tertiary amino groups in the main chain, which were synthesized previously, showed a little better short-term antithrombogenicity than the present H-PAEUUs containing tertiary amino groups in the side chains. Since ammonium groups in the side chains of Q-PAEUU impose little steric hindrance against the heparin adsorption, the release of heparin from the side chains of H-PAEUU was slower but lasted longer than that from the main chain. Therefore, the present H-PAEUU is expected to be a long-term antithrombogenic material.

L27 ANSWER 4 OF 52 MEDLINE on STN DUPLICATE 4
AN 87008666 MEDLINE
DN PubMed ID: 3760013
TI Synthesis of novel polyaminoetherurethaneureas and development of antithrombogenic material by their chemical modifications.
AU Shibuta R; Tanaka M; Sisido M; Imanishi Y

SO Journal of biomedical materials research, (1986 Sep) 20 (7) 971-87.
Journal code: 0112726. ISSN: 0021-9304.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198611
ED Entered STN: 19900302
Last Updated on STN: 19900302
Entered Medline: 19861107
AB Novel polyaminoetherurethaneureas containing tertiary amino groups in the main chain were synthesized (PAEUU), quaternized (Q-PAEUU), and heparinized (H-PAEUU). Films of PAEUU showed a microphase separation, which was influenced by the quaternization and the heparinization. With increasing content of amino group, the water content of Q-PAEUU and the heparin content of H-PAEUU increased. The heparin-releasing rate from H-PAEUU into physiological saline solution was slow, but increased with increasing content of **quaternary ammonium** groups in the polymer. The water content, the heparin adsorption, and the heparin-releasing rate were controlled by the kind of quaternizing agent. The antithrombogenicity of the **polyurethaneureas** was improved by quaternization and very much by heparinization, and affected by the kind of quaternizing agent. Heparinization was indispensable for achieving antithrombogenicity of the polymer, although the antithrombogenicity of H-PAEUU was affected more strongly by the water content than by the heparin content. The surface free energy of these polymer films was also investigated.

L27 ANSWER 5 OF 52 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
AN 2001:373330 BIOSIS
DN PREV200100373330
TI Cosmetic composition comprising at least one nonionic amphiphilic associative **polyurethane** and at least one quaternary silicone.
AU Dupuis, Christine [Inventor, Reprint author]
CS Paris, France
ASSIGNEE: L'Oreal, Paris, France
PI US 6258367 20010710
SO Official Gazette of the United States Patent and Trademark Office Patents, (July 10, 2001) Vol. 1248, No. 2. e-file.
CODEN: OGUPE7. ISSN: 0098-1133.
DT Patent
LA English
ED Entered STN: 8 Aug 2001
Last Updated on STN: 19 Feb 2002
AB A cosmetic composition having, in a cosmetically acceptable medium, at least one nonionic amphiphilic associative **polyurethane**, and at least one silicone containing **quaternary ammonium** groups.

L27 ANSWER 6 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2005-076115 [09] WPIX
CR 2005-050154 [06]
DNN N2005-121744 DNC C2005-046573
TI Hydrophilic material useful in body care application e.g. wound dressing comprises hydrophilic **polyurethane** foam covalently bonded to **antimicrobially active quaternary ammonium** compound which has apolar end group.
DC A25 A96 D22 G03 P34
IN VERWEIRE, I

PA (CORP-N) CORPURA BV

CYC 33

PI EP 1493452 A2 20050105 (200509)* EN 14

R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IT LI LT LU
LV MC MK NL PL PT RO SE SI SK TR

ADT EP 1493452 A2 EP 2004-76789 20040618

PRAI EP 2003-76909 20030618

AB EP 1493452 A UPAB: 20050308

NOVELTY - An **antimicrobially** active flexible hydrophilic material (m1) comprises a hydrophilic **polyurethane** foam covalently bonded to at least one **antimicrobially** active **quaternary ammonium** compound which has an apolar end group.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) a wound dressing comprising (m1); and
(2) production of a self-adherent hydrophilic **polyurethane** foam having an adhesive coating on at least a portion of its surface involving spreading a curable composition containing an excess of water, in a layer; applying a water-based adhesive on at least a portion of the surface of the layer; followed by curing and drying.

ACTIVITY - Vulnerary.

MECHANISM OF ACTION - None given.

USE - In wound dressing (claimed) for the treatment of heavily exuding wound. Also in body care applications such as wound care, incontinence care, ostomy care, skin care and cosmetic care.

ADVANTAGE - The material has a fluid absorption capacity after saturation, of higher than 4 (preferably higher than 8, especially higher than 12, and particularly higher than 15) g; fluid absorption capacity after drain, of higher than 2 (preferably higher than 6, especially higher than 10, and particularly higher than 13) g; and a wet out, lower than 500 (preferably lower than 250, especially lower than 50 and particularly lower than 10) seconds. Thus the material is hydrophilic and has a relatively high fluid absorption capacity both after saturation of the material and after drain and a relatively small wet out. The wound dressing thus keeps the wound wet, without leaching any **antimicrobial** agent in the wound, and can be left for quite a long time onto the wound.

Dwg.0/0

L27 ANSWER 7 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2004-775362 [76] WPIX

DNN N2004-610858 DNC C2004-271441

TI Fabric article for e.g. covering piece of furniture such as chair, or sofa, comprises aminate including fabric layer having part that is permeable to water vapor, first layer, and second layer comprising sanitary agent(s).

DC A32 A83 A84 F07 P73

IN CARR, C; VAN EMDEN, O

PA (LIGH-N) LIGHTEX LTD

CYC 108

PI WO 2004089614 A2 20041021 (200476)* EN 53

RW: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE
LS LU MC MW MZ NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZWW: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE
DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG
KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ
OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG
US UZ VC VN YU ZA ZM ZW

ADT WO 2004089614 A2 WO 2004-GB1479 20040405
 PRAI GB 2004-1725 20040127; GB 2003-8497 20030412;
 GB 2004-1655 20040126
 AB WO2004089614 A UPAB: 20041125

NOVELTY - A fabric article (1) comprises a laminate including a fabric layer (6), at least part of which is permeable to water vapor; a first layer (4), at least part of which is permeable to water vapor and resistant to permeation of liquid water; and a second layer (2) comprising one or more sanitary agents. The first layer is interposed between the fabric and second layers.

DETAILED DESCRIPTION - A fabric article comprises a laminate including a fabric layer, at least part of which is permeable to water vapor; a first layer, at least part of which is permeable to water vapor and resistant to permeation of liquid water; and a second layer comprising one or more sanitary agents. The first layer is interposed between the fabric and second layers. The second layer is, in use, the closest of the layers to the intended wearer of the article of clothing and the fabric layer is irremovably connected directly or indirectly to one or more of the other layers of the laminate. INDEPENDENT CLAIMS are also included for:

- (a) an article of furniture comprising a covering;
- (b) a handle-grip comprising an article;
- (c) a receptacle comprising a laminate; and
- (d) a method of manufacturing an article of clothing comprising an outer fabric permeable to water vapor, comprising providing a fabric which will form the outer fabric of the article of clothing; providing a first layer of material that is permeable to water vapor and resistant to the permeation of liquid water; providing a second layer of material comprising one or more sanitary agents and adhering the first layer of material to at least part of one side of the fabric intended to form the outer fabric, the one side intended to be the interior side of the article of clothing; adhering the second layer of material to at least part of one side of the first layer, the one the of the first layer intended to be towards the interior side of the article of clothing; and forming the fabric into the article of clothing, the first layer being on the interior side of the outer fabric in the article of clothing.

USE - The fabric article can be used as clothing, such as shirt; T-shirt; pullover; male or female brief; bra; cardigan; skirt; dress; blouse; trousers; shorts; sock; tie; pair of jeans; glove; coat; jacket; boxing glove; mitt; hats; caps; skull caps; or helmets. The article can also be a bed linen e.g. pillow case, quilt cover or laminate bed sheet. It can be an item of footwear e.g. shoes, boots, slippers, sandals, sports shoes or trainers. The article can be used for covering a piece of furniture such as chair, sofa, wheelchair, car seat, mattress, stool seat or handle-grip. The article can be a receptacle such as rucksack, holdall, suitcase handbag, shoulder bag, purse wallet, beach bag, sports bag, or sleeping bag. The article is also for covering or incorporation into a floor, wall or ceiling, for covering a piping, or for industrial use. (All claimed)

ADVANTAGE - The fabric having improved sanitary properties, and is breathable in which sweat and moisture in liquid form could be kept away from a user's skin (10) and wicked away by the breathable fabric. The fabric articles especially clothing articles, include breathable material having sanitary properties, and preventing visible moisture build-up on or within the article. The laminate structure prevents or mitigates the visibility, from the exterior of the clothing, of a wearer's perspiration in the region of the laminate, and allows transmission of the water from the perspiration through the clothing.

DESCRIPTION OF DRAWING(S) - The figure illustrates a part

cross-sectional view of a laminate for use in article of clothing.

Fabric article 1

Second layer 2

First layer 4

Fabric layer 6

Intermediate layer 8

User's skin 10

Dwg.1/4

L27 ANSWER 8 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2004-677104 [66] WPIX

DNC C2004-241293

TI Foamed hydrophilic **polyurethane** composition for use in cleaning article, e.g. sponge, for cleaning and/or sanitizing surface comprises **quaternary ammonium** compounds having germicidal properties.

DC A25 A97 D22 D25 E16

IN BURT, D J; FENG, J C; HERMANN, P; NEKMARD, F A

PA (RECK) RECKITT BENCKISER INC; (RECK) RECKITT BENCKISER UK LTD

CYC 108

PI WO 2004078900 A1 20040916 (200466)* EN 66

RW: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE

LS LU MC MW MZ NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE

DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG

KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ

OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG

US UZ VC VN YU ZA ZM ZW

GB 2406099 A 20050323 (200521)

ADT WO 2004078900 A1 WO 2004-GB843 20040301; GB 2406099 A GB 2003-21869 20030918

PRAI GB 2003-21869 20030918; US 2003-452150P 20030305;

GB 2003-17198 20030723

AB WO2004078900 A UPAB: 20041015

NOVELTY - A foamed hydrophilic **polyurethane** composition comprises **quaternary ammonium** compound(s) having germicidal properties. Following at least 25 rinse/squeeze cycles, an elution of at least 100 ppm germicidal **quaternary ammonium** compounds in the fluid is squeezed or wrung from the article.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a cleaning article comprising a foamed **polyurethane** composition.

USE - For use in an article for cleaning and/or sanitizing a surface in need of treatment by contacting the surface with the foamed **polyurethane** article to provide a cleaning and/or sanitizing effect (claimed), where the cleaning article is sponge, sheet, tape, ribbon, block or other molded, extruded or cast article.

ADVANTAGE - The composition provides a residual **antimicrobial** effect after a significant number of uses by a consumer. Following at least 50 rinse/squeeze cycles, an elution of at least 100 ppm germicidal **quaternary ammonium** compounds in the fluid is squeezed or wrung from the article.

DESCRIPTION OF DRAWING(S) - The figure shows a molded cleaning article of the invention.

Body 12

Upper curved surface 13

Non-woven abrasive sheet material 14

Lower flat surface 15

Dwg.1/3

L27 ANSWER 9 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2004-707450 [69] WPIX
DNC C2004-249457
TI Polymer composition useful in medical article e.g. a wound dressing
comprises a hydrophilic amine-containing polymer and a bioactive agent.
DC A18 A23 A25 A96 B07 D22 P34
IN BURTON, S A; HYDE, P D
PA (MINN) 3M INNOVATIVE PROPERTIES CO
CYC 108
PI US 2004180093 A1 20040916 (200469)* 19
WO 2004080499 A1 20040923 (200469) EN
RW: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE
LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE
DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG
KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ
OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG
US UZ VC VN YU ZA ZM ZW
ADT US 2004180093 A1 CIP of US 2003-387051 20030312, US 2003-728577 20031205;
WO 2004080499 A1 WO 2004-US3755 20040209
PRAI US 2003-728577 20031205; US 2003-387051 20030312
AB US2004180093 A UPAB: 20041027
NOVELTY - A polymer composition (C1) comprises a hydrophilic
amine-containing polymer having average molecular weight of at least 1000;
and a bioactive agent, is new.
DETAILED DESCRIPTION - A polymer composition (C1) comprises a
hydrophilic amine-containing polymer having average molecular weight of at
least 1000, and is selected from a poly(quaternary amine), a polylactam,
and/or a polyamide; and a bioactive agent. The bioactive agent is a silver
compound, a copper compound, and/or a zinc compound, where the silver
compound has solubility in water of at least 0.1 g/liter in water. The
bioactive agent is distributed in amine-containing polymer.
INDEPENDENT CLAIMS are also included for the following:
(1) preparation of a polymer composition (C2) involves combining an
organic polymer matrix, an inverse emulsion, a bioactive agent, and an
optional foaming agent. The inverse emulsion comprises absorbent
hydrophilic microparticles (average particle size of at most 10 microns in
nonhydrated form) containing an amine-containing organic polymer selected
from a poly(quaternary amine), a polylactam, and/or a polyamide. At least
a portion of the bioactive agent is incorporated within the
microparticles;
(2) preparation (P1) of (C1) involving: combining an inverse emulsion
containing hydrophilic organic microparticles with water and a bioactive
agent under conditions effective to distribute at least a portion of the
bioactive agent in the hydrophilic organic microparticles; optionally
adding a secondary organic polymer to the inverse emulsion containing the
microparticles and bioactive agent; and optionally removing a portion of
the water; and
(3) a wound dressing comprising an apertured, liquid permeable
substrate and (C1) or (C2), which is nonadherent.
ACTIVITY - **Antimicrobial**; Vulnerary.
MECHANISM OF ACTION - None given.
USE - For preparing polymer composition, which is useful in medical
article (e.g. a wound dressing, a wound packing material (claimed),
topical cream or topical lotion); and for good release of bioactive
compound (e.g. **antimicrobial** agent).
ADVANTAGE - The composition is stable to visible light, ultraviolet
light, electron beam and gamma ray sterilization radiation.

Dwg.0/0

L27 ANSWER 10 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 2004-463049 [44] WPIX
 DNC C2004-173357
 TI Hydrophilic coating composition for water condensation inhibitor,
 comprises natural water-soluble viscosifying polysaccharide, hydrophilic
 metal oxide particle, surfactant and solvent.
 DC A25 A82 D25 E11 E13 G02
 PA (TTOC) TOTO LTD
 CYC 1
 PI JP 2004143443 A 20040520 (200444)* 14
 ADT JP 2004143443 A JP 2003-335817 20030926
 PRAI JP 2002-285364 20020930
 AB JP2004143443 A UPAB: 20040712

NOVELTY - A hydrophilic coating composition comprises natural water-soluble viscosifying polysaccharide, hydrophilic metal oxide particle, surfactant and solvent. The surfactant is chosen from non-ionic surfactant, anionic surfactant, cationic surfactant, amphoteric ion type surfactant and fluorochemical surfactant.

DETAILED DESCRIPTION - Hydrophilic coating composition comprises natural water-soluble viscosifying polysaccharide, hydrophilic metal oxide particle, surfactant and solvent. The surfactant is chosen from non-ionic surfactant, anionic surfactant, cationic surfactant, amphoteric ion type surfactant and fluorochemical surfactant. The non-ionic surfactant is ether type, polyhydric alcohol type, ester type, polyhydric alcohol ester type or alkanol amide type surfactant. The anionic surfactant is fatty acid salt, sulfuric ester salt, sulfonate or phosphate ester salt. The cationic surfactant is **quaternary ammonium** salt type, amine salt type, amino acid type, betaine type or amine oxide type surfactant. The fluorochemical surfactant is perfluoroalkyl sulfonate, perfluoroalkyl carboxylate salt, perfluoroalkyl ethylene oxide addition product, perfluoroalkyl trimethyl ammonium salt, perfluoroalkyl amino sulfonate, perfluoro-alkyl group containing oligomer, perfluoro alkenyloxy benzene sulfonate, perfluoro alkenyloxy benzenesulfonyl sarcosine sodium, perfluoro alkenyl polyoxyethylene ether, perfluoro alkenyloxy benzene sulfone alkyl ammonium iodide, perfluoro alkenyloxy benzeneamide dialkyl ammonium iodide, perfluoro alkenyloxy aralkyl betaine, perfluoro alkenyloxy aralkyl phosphonic acid and tetrakis diglyceride.

INDEPENDENT CLAIMS are included for the following:

(1) water condensation inhibitor comprising hydrophilic coating composition which suppresses condensation of water; and

(2) water condensation suppression method, which involves impregnating hydrophilic coating composition and water condensation inhibitor into **polyurethane** foam sponge subjected to heat compression and applying to hard material using the sponge.

USE - For water condensation inhibitor (claimed) used for window glass, window sash, plastic base material, mirror, car window, flush tank of toilet device, metal door and piping.

ADVANTAGE - The water condensation inhibitor has fog prevention ability and decreases the production of conspicuous water droplets. The inhibitor further prevents the dripping of water droplets from hydrophilic surface on which condensed water is present. The inhibitor prevents adhesion of lipophilic component containing dust and therefore has stain resistance. The coating film of the composition has water resistance and maintains hydrophilicity over a long period of time even when exposed to water or vapor repeatedly.

Dwg.0/0

L27 ANSWER 11 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2005-050154 [06] WPIX
CR 2005-076115 [09]
DNN N2005-043927 DNC C2005-017634
TI Polymeric flexible material in body care applications e.g. wound care, comprises a polymeric substrate having covalently bonded at least one **antimicrobially** active compound.
DC A14 A25 A96 B07 D22 P34
IN VERWEIRE, I
PA (CORP-N) CORPURA BV
CYC 31
PI EP 1488815 A1 20041222 (200506)* EN 11
R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV
MC MK NL PT RO SE SI SK TR
ADT EP 1488815 A1 EP 2003-76909 20030618
PRAI EP 2003-76909 20030618
AB EP 1488815 A UPAB: 20050207
NOVELTY - A polymeric flexible material (m1) comprising a polymeric substrate having covalently bonded at least one **antimicrobially** active compound (c1), is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:
(1) a wound dressing comprising (m1) provided with an adhesive (s1) at the wound covering surface to be self adherent; and
(2) preparation of (m1) involves preparing a reaction mixture from an isocyanate stream containing an isocyanate prepolymer, and an aqueous stream containing surfactant and (c1), and allowing the reaction mixture to foam and to cure to produce **polyurethane** foam.
ACTIVITY - **Antimicrobial**; Dermatological; Vulnerary.
MECHANISM OF ACTION - None given.
USE - In body care applications e.g. wound care, incontinence care, ostomy care, skin care and cosmetic care; for wound dressing (claimed).
ADVANTAGE - (m1) is hydrophilic having a fluid absorption capacity after saturation of (m1) of higher than 4 (preferably higher than 8, especially higher than 12, particularly higher than 15) g per gram material; a fluid absorption capacity after draining (m1) higher than 2 (preferably higher than 6, especially higher than 10, particularly higher than 13) g per gram material; and a wet out, lower than 200 (preferably lower than 100, especially lower than 50, particularly lower than 10) seconds. The wound dressing keeps the wound wet, without leaching any **antimicrobial** agent in the wound, and can be left for a long time onto the wound. (m1) is effective for treating heavily exuding wounds.
Dwg.0/0

L27 ANSWER 12 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2004-042428 [04] WPIX
DNC C2004-017357
TI New heterocyclic amine polyol compounds, useful in protective films and paints, comprise heterocyclic amine and an amine polyol group covalently bonded to the heterocyclic amine through linking group.
DC A82 C02 E13 G02
IN LI, Y; WORLEY, S D
PA (AUBU) UNIV AUBURN; (VANS-N) VANSON HALOSOURCE INC
CYC 103
PI WO 2003095431 A1 20031120 (200404)* EN 18
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS
LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PH PL

PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU
ZA ZM ZW

US 2003220415 A1 20031127 (200410)

AU 2003232062 A1 20031111 (200442)

ADT WO 2003095431 A1 WO 2003-US14033 20030502; US 2003220415 A1 Provisional US
2002-379969P 20020510, US 2002-190897 20020705; AU 2003232062 A1 AU
2003-232062 20030502

FDT AU 2003232062 A1 Based on WO 2003095431

PRAI US 2002-190897 20020705; US 2002-379969P 20020510

AB WO2003095431 A UPAB: 20040115

NOVELTY - Heterocyclic amine polyol compounds comprising a heterocyclic amine selected from hydantoin, imidazolidinone, oxazolidinone, isocyanurate, glycoluril or triazinedione and an amine polyol group covalently bonded to the heterocyclic amine through a linking group are new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for:

(1) A composition comprising heterocyclic amine polyol compound of formula (I);

(2) preparation (P1) of a polymer involving mixing at least one compound having a functional group reactive toward an alcohol group and (I); and optionally curing the mixture;

(3) Method (M1) for preparing a thin film protective layer involving mixing at least one compound having a functional group reactive toward an alcohol group and (I); forming a thin layer from the mixture; and allowing the layer to cure;

(4) A paint (P2) comprising a paint component having a heterocyclic amine group covalently bonded to a urethane group through an amine polyol group;

(5) A paint prepared by reacting paint component having an isocyanate group with a compound of formula $R-CH_2-N((CH_2CH(R_3)-OH)_2$ (II) or (I);

(6) A polymer (P3) comprising moieties of formula $R-CH_2-N(CH_2-CH(R_3)-O-)_2$ (III) and (IV);

(7) Preparation of heterocyclic amine polyol;

(8) A **polyurethane** polymer (P4) comprising moieties of formula (V) and (VI); and

(9) An article comprising moieties of (III) and (IV).

X = H or halo;

R = hydantoin, imidazolidinone, oxazolidinone, isocyanurate, glycoluril or triazinedione);

R1 and R2 = 1-6C alkyl or phenyl; and

R3 = H or 1-6C alkyl.

ACTIVITY - **Antimicrobial**. 3-(1-Bis(N,N-2-hydroxyethyl)aminomethyl)-5,5-dimethyl-1,3-imidazolidin-2,4-dione (A) coated on a thin film protective layer was exposed to *Staphylococcus aureus* for 2 hours. The **microbiological** evaluations were performed as a function of chlorination concentration and of time following chlorination. The thin film chlorine loadings and biocidal efficacy of (a) as a function of chlorination concentration was 1.34 multiply 10¹⁷ (Cl atoms/cm² surface) and greater than 4.5 (no growth) (log reduction in *S. aureus*).

MECHANISM OF ACTION - **Microbial** growth inhibitor.

USE - The compounds and polymers are useful in paint protective films, sponges, foams, paints (claimed), coatings, sealant, adhesives, and other applications. It is also useful for the inactivation of disease-causing pathogens and odor-causing microorganisms; in medical settings such as hospitals, nursing and research laboratories; and for preparing biocidal coatings.

ADVANTAGE - The compounds and polymers are more effective against pathogenic microorganisms e.g. *S. aureus* and *P. aeruginosa* encountered in

medical applications, than commercial biocides e.g. **quaternary ammonium** salts.
Dwg.0/0

L27 ANSWER 13 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2003-767240 [72] WPIX
DNC C2003-210730
TI **Antimicrobial** polymeric composition for medical device coatings for e.g. catheters, comprises crosslinked chemical combination of polymer having amine-containing side chains, **antimicrobial** agent, and crosslinking agent.
DC A23 A82 D22 E19 G02
IN HUANG, Z; MCDONALD, W F; WRIGHT, S C; MC DONALD, W F
PA (HUAN-I) HUANG Z; (MCDO-I) MCDONALD W F; (WRIG-I) WRIGHT S C; (MICH-N) MICHIGAN BIOTECHNOLOGY INST
CYC 102
PI WO 2003066721 A1 20030814 (200372)* EN 55
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS
LU MC MW MZ NL OA PT SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT
RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM
ZW
US 2003157193 A1 20030821 (200372)
AU 2003207801 A1 20030902 (200425)
ADT WO 2003066721 A1 WO 2003-US3102 20030203; US 2003157193 A1 US 2002-68054
20020205; AU 2003207801 A1 AU 2003-207801 20030203
FDT AU 2003207801 A1 Based on WO 2003066721
PRAI US 2002-68054 20020205
AB WO2003066721 A UPAB: 20031107
NOVELTY - An **antimicrobial** polymeric composition comprises crosslinked chemical combination of polymer having amine-containing side chains, **antimicrobial** agent, and crosslinking agent capable of reacting with amino groups.
DETAILED DESCRIPTION - The **antimicrobial** agent can be a **quaternary ammonium** compound, gentian violet compound, optionally substituted phenol, biguanide compound and/or iodine compound.
An INDEPENDENT CLAIM is also included for a method of rendering the surface of the substrate **antimicrobial** comprising mixing the amine-containing polymer with a first crosslinking agent, coating the substrate with the polymer solution, mixing a second crosslinking agent and an **antimicrobial** agent, and applying the coating solution to the crosslinked polymer coating on the substrate.
USE - For medical device coatings for e.g. catheters, endotracheal tubes, prostheses, grafts, sutures, dressings, and implants.
ADVANTAGE - The inventive composition may be easily applied to a substrate to provide an article with excellent **antimicrobial** properties and retains its **antimicrobial** properties in a permanent and non-leachable fashion when in contact with bodily fluids for prolonged periods.
Dwg.0/2

L27 ANSWER 14 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2003-756613 [71] WPIX
DNN N2003-606359 DNC C2003-207570
TI **Microbe** trapping agent containing e.g. dicarboxylic acid, benzotriazole, amide, azo compound and/or new or known **quaternary ammonium** salt (polymer), for trapping **microbes** in air or

water, and for use in bioreactor or biosensor.

DC A18 A89 A97 B04 D15 D16 E19 J01 J04 S03

IN SUGAWARA, S

PA (ASAHI) ASAHI KASEI KK

CYC 103

PI WO 2003066192 A1 20030814 (200371)* JA 114

RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS

LU MC MW MZ NL OA PT SD SE SI SK SL SZ TR TZ UG ZM ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK

DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR

KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT

RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA

ZM ZW

AU 2003207181 A1 20030902 (200425)

TW 593385 A 20040621 (200506)

ADT WO 2003066192 A1 WO 2003-JP1322 20030207; AU 2003207181 A1 AU 2003-207181
20030207; TW 593385 A TW 2003-102693 20030207

FDT AU 2003207181 A1 Based on WO 2003066192

PRAI JP 2002-309541 20021024; JP 2002-30954 20020207;

JP 2002-141158 20020516

AB WO2003066192 A UPAB: 20031105

NOVELTY - Micro-organism trapping agent comprises at least one of:

(a) a compound with at least 2 carboxy groups;

(b) a benzotriazole compound;

(c) an amide;

(d) a water-insoluble azo compound;

(e) a **quaternary ammonium** salt; and

(f) a polymer or copolymer with a **quaternary ammonium** group in the side chain.

DETAILED DESCRIPTION - Micro-organism trapping agent comprises at least one of:

(a) a compound with at least 2 carboxy groups;

(b) a benzotriazole compound;

(c) an amide;

(d) a water-insoluble azo compound;

(e) a **quaternary ammonium** salt of formula

(N(R1)(R2)(R3)CH3)+X- (1); and

(f) a polymer with **quaternary ammonium** salt which has units of formula -(CH2-CHA')k(CH2CCl2)l- (2), -(CH2-CHA')k(CH2C(Y)R6))l- (3), or of formula (4) or (5).

R1-R3 = optionally unsaturated 1-50C aliphatic hydrocarbyl (optionally substituted by OH), 6-50C aryl, 4-pyridyl, 2-dimethylaminoethyl, 2-(N-benzyl-N,N-dimethylammonium)ethyl, benzyl, optionally unsaturated fatty acid residue, or optionally unsaturated fatty acid ester residue;

X = halide, alkylsulfonate, arylsulfonate, sulfate or nitrate;

A' = 4-(CH2R4)phenyl;

R4 = quaternary halide of pyridine, 4-dimethylaminopyridine, 2,4,6-collidine, 2,3,5-collidine, tri(optionally unsaturated 3-18C aliphatic hydrocarbyl)amino or quinoline;

R6 = H or 1-3C alkyl;

Y = H, optionally unsaturated 1-50C aliphatic hydrocarbyl, optionally unsaturated 1-50C aliphatic hydrocarbyloxy, optionally unsaturated 1-50C aliphatic hydrocarbyloxycarbonyl, optionally unsaturated 1-50C fatty acid residue, 6-50C aryl, benzyl or COOH;

k-n, r, s = 10-100000.

INDEPENDENT CLAIMS are included for:

(1) composite for trapping **microbes** which contains 0.001-20 weight % of the agent, on a support;

(2) a method of trapping **microbes**, comprising contacting the agent or complex with a liquid contain **microbes**;

(3) N-benzyl-N-4-pyridyl-N,N-dimethylammonium chloride; and

(4) polymers of formula (2).

USE - The agent is for water treatment, for trapping **microbes** and fungi in water or air; and the composite is for use in a bioreactor or biosensor.

ADVANTAGE - The material is active for a long time.

Dwg.0/0

L27 ANSWER 15 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2003-721592 [68] WPIX

DNC C2003-198486

TI Liquid conditioner and substrate impregnated with conditioner, used in textile drying process, contains fluff-reducing component, preferably cellulose, hydrogel or acrylic polymer.

DC A14 A25 A26 A97 D25 E16 E17

IN GENTSCHKEV, P; JEKEL, M; JESCHKE, R; PENNINGER, J; SCHEFFLER, K; SCHRECK, B; SCHYMITZEK, T

PA (HENK) HENKEL KGAA; (GENT-I) GENTSCHKEV P; (JEKE-I) JEKEL M; (JESC-I) JESCHKE R; (PENN-I) PENNINGER J; (SCHE-I) SCHEFFLER K; (SCHR-I) SCHRECK B; (SCHY-I) SCHYMITZEK T

CYC 44

PI WO 2003062361 A1 20030731 (200368)* GE 47

RW: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT SE SI SK TR

W: AU BR CA CN DZ ID IL IN JP KR MX PL RO RU SG UA US ZA

DE 10203192 A1 20030814 (200368)

US 2003162689 A1 20030828 (200368)

AU 2003206728 A1 20030902 (200422)

EP 1468068 A1 20041020 (200469) GE

R: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

ADT WO 2003062361 A1 WO 2003-EP323 20030115; DE 10203192 A1 DE 2002-10203192 20020125; US 2003162689 A1 Provisional US 2002-351878P 20020125, US 2002-328680 20021223; AU 2003206728 A1 AU 2003-206728 20030115; EP 1468068 A1 EP 2003-704400 20030115, WO 2003-EP323 20030115

FDT AU 2003206728 A1 Based on WO 2003062361; EP 1468068 A1 Based on WO 2003062361

PRAI US 2002-351878P 20020125; DE 2002-10203192 20020125;

US 2002-328680 20021223

AB WO2003062361 A UPAB: 20031022

NOVELTY - Liquid conditioner contains fluff-reducing component(s) (I).

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a conditioning substrate obtained by impregnating and/or soaking a substrate with the cited conditioner.

USE - One or more of the conditioning substrates is used in a textile drying process; and the conditioner and/or conditioning substrate is used for reducing fluff and/or pill formation on textiles, especially during drying (all claimed).

ADVANTAGE - The conditioner causes a considerable reduction in fluff and pill formation on textiles, especially during washing or drying.

Dwg.0/0

L27 ANSWER 16 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2003-617896 [58] WPIX

CR 2000-423186 [36]

DNN N2003-492243 DNC C2003-168432

TI Material comprises enhanced surface area, consisting multitude of

non-hydrolyzable, non-leachable polymer chains comprising multitude of **antimicrobial** groups, and covalently bonded by non-siloxane bonds to substrate.

DC A14 A96 A97 C03 D22 E16 F07 F09 G02 J04 K02 P34
 IN BATICH, C D; GRANITO, M R; LERNER, D S; MAST, B A; OLDERMAN, G M; SCHULTZ, G; TOREKI, W
 PA (QUIC-N) QUICK-MED TECHNOLOGIES INC; (UYFL) UNIV FLORIDA
 CYC 101
 PI WO 2003039602 A2 20030515 (200358)* EN 58
 RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU
 MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW
 W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
 DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
 KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT
 RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM
 ZW
 EP 1450966 A2 20040901 (200457) EN
 R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LT LU LV MC
 MK NL PT RO SE SI SK TR
 AU 2002348578 A1 20030519 (200464)
 ADT WO 2003039602 A2 WO 2002-US30998 20020930; EP 1450966 A2 EP 2002-782083
 20020930, WO 2002-US30998 20020930; AU 2002348578 A1 AU 2002-348578
 20020930
 FDT EP 1450966 A2 Based on WO 2003039602; AU 2002348578 A1 Based on WO
 2003039602
 PRAI US 2001-965740 20010928
 AB WO2003039602 A UPAB: 20041006

NOVELTY - A material comprises a substrate and an enhanced surface area, consisting a multitude of non-hydrolyzable, non-leachable polymer chains covalently bonded by non-siloxane bonds to the sites of the substrate. The non-hydrolyzable, non-leachable polymer chains comprise a multitude of **antimicrobial** groups attached to the non-hydrolyzable, non-leachable polymer chains by covalent bonds.

DETAILED DESCRIPTION - A material comprises a substrate and an enhanced surface area, consisting a multitude of non-hydrolyzable, non-leachable polymer chains covalently bonded by non-siloxane bonds to the sites of the substrate to render the material **antimicrobial**, or receptive to avoid binding of negatively charged dye molecules, when exposed to aqueous fluids, menses, bodily fluids, skin, cosmetics compositions, or wound exudates. The non-hydrolyzable, non-leachable polymer chains comprise a multitude of **antimicrobial** groups attached to the non-hydrolyzable, non-leachable polymer chains by covalent bonds.

An INDEPENDENT CLAIM is also included for a method of preparing a non-leaching **antimicrobial**-coated composition, comprising immersing a substrate into a solution containing quantity of monomer bearing **antimicrobial** group(s) per monomer molecule, and a quantity of catalyst to sustain polymerization reactions to coat the substrate to impart an **antimicrobial** characteristic; maintaining the contact of the substrate with the solution under conditions for a period of time to complete the reaction, forming polymers of varying lengths, and forming covalent, non-siloxane bonds between the majority of the polymers of varying lengths and binding sites on the substrate; rinsing the substrate to remove non-polymerized monomer molecules, non-stabilized polymer molecules, and catalyst; and drying the substrate to a desired low moisture content, such that the substrate is not a hydrogel.

USE - The material comprises wound dressing; sanitary pad; a tampon; an intrinsically **antimicrobial** absorbent dressing; a diaper;

toilet paper; a sponge; a sanitary wipe; isolation and surgical gowns; gloves; surgical scrubs; sutures; sterile packaging; floor mats; lamp handle covers; burn dressings; gauze rolls; blood transfer tubing or storage container; mattress cover; bedding; sheet; towel; underwear; socks; cotton swabs; applicators; exam table covers; head covers; cast liners; splint; paddings; lab coats; air filters for autos; planes or heating, ventilating and air-conditioning system; military protective garments; face masks; devices for protection against biohazards and biological warfare agents; lumber; meat or fish; packaging material; apparel for food handling; paper currency; powder; and other surfaces required to exhibit a non-leaching **antimicrobial** property (claimed). It is used for treatment of wounds; athlete's foot; jock itch; chaffing; and other dermatological conditions in which opportunistic infections or irritations need to be controlled.

ADVANTAGE - The invention functions better than current dressings. It protects the epithelium and surrounding non-wounded skin, which wicks away moisture from the wound area, and which does not purposely adhere to the wound or the surrounding area. A broad spectrum of antibacterial or **antimicrobial** agent remains in the material, where it can prevent bacterial growth, without exerting any negative effects on adjacent living tissue. It has non-leaching, antibacterial or **antimicrobial** surfaces to act prophylactically to prevent or reduce the presence of pathogens. The materials can be produced without significant changes in the physical properties of the substrates such as texture, color, odor, softness, or mechanical strength.

Dwg.0/0

L27 ANSWER 17 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 2003-381423 [36] WPIX
 DNC C2003-101181
 TI New phosphonium compound for use as, e.g. scale inhibitors, scale
 dissolvers, corrosion inhibitors, chelating agents, cross-linking agents
 in leather tanning, or preservative to prevent **microbial**
 spoilage.
 DC A60 D18 E11 F06
 IN BREEN, S G; D'ARBELOFF-WILSON, S; DAVIS, K P; JONES, C R; OTTER, G P;
 PADDA, R S; TALBOT, R E; WOODWARD, G
 PA (RHOD) RHODIA CONSUMER SPECIALTIES LTD
 CYC 101
 PI WO 2003021031 A1 20030313 (200336)* EN 42
 RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU
 MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW
 W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
 DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
 KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT
 RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA
 ZM ZW
 AU 2002321540 A1 20030318 (200452)
 ADT WO 2003021031 A1 WO 2002-GB3907 20020823; AU 2002321540 A1 AU 2002-321540
 20020823
 FDT AU 2002321540 A1 Based on WO 2003021031
 PRAI GB 2002-14337 20020621; GB 2001-21246 20010901;
 GB 2002-8087 20020409
 AB WO2003021031 A UPAB: 20030609
 NOVELTY - A phosphonium compound (I) is new.
 DETAILED DESCRIPTION - A phosphonium compound of formula
 (Y'nP+(CH2OH)4-nl)X- (I) is new:
 nl = 1-4;
 X = anion;

Y' = organic residue including a hydrophilic group.

INDEPENDENT CLAIMS are also included for:

- (a) a phosphine compound of formula $Y'nP(CH_2OH)_3-n_2$ (II); and
- (b) a method of preparing the (I) and (II).

$n_2 = 1-3$

USE - The inventive compound is useful as scale inhibitors, scale dissolvers, corrosion inhibitors, chelating agents, flame retardants, disinfectants, in surface modification of a substrates, as ion exchangers, cement additives, adhesion promoters or gelatine hardening agents. The compounds are used as cross-linking agents in leather tanning.

The compounds are also useful with other pre-tanning agents, organic tanning agents, mineral tannings, vegetable tannins, bating enzymes, pickling acids or salts, pickle replacement, syntans, resins, dyes, fat liquors, water proofing agents, oil tannages, splitting, shaving aids or other finish crosslinkers. The compounds are also useful as pretanning, tanning or retanning agents, cross-linking agents for leather finishes, fixing agents for dyes or amino-derivatives on to wool, polyester, polyamide or leather substrates. The leather finishes are casein finishes or **polyurethane** based finishes.

The amino derivatives are aminosilicones or amine-derivatized dyes. The compounds are also used as biocides, bactericides, slimicides, algicides, fungicides, or anti-protozoals in treatment of water systems or of industrial processing using water. The compounds are useful as preservative to prevent **microbial** spoilage of product.

The biocides are poly-**quat. ammonium** compounds, **quat. ammonium** compounds, mono-aldehydes or poly-aldehydes, isothiazolones, oxidizin biocides, halogenated organics, bromotiocarbamates, or polymeric biguanidines. The compounds are useful as iron sulfide dissolvers. (All claimed).

The products being preserved by the compounds include functional fluids, slurries, emulsions, suspensions and homogeneous solutions like drilling fluids, completion fluids, fracturing fluids, clay slurries, kaolin slurries, silica slurries or calcium carbonate slurries.

ADVANTAGE - The inventive compounds have low lower residual free formaldehyde levels in wet white and crusted skins and in finish leather, white and fuller skins and reduced grain tanning, and give a more versatile leather.

Dwg.0/0

L27 ANSWER 18 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2003-596948 [56] WPIX

CR 2002-267440 [31]

DNC C2003-161665

TI Novel dendrimer biocide-silver nanocomposite composition comprises a **quaternary ammonium** dendrimer biocide and silver ions associated with biocide.

DC A96 D22 G02 K02

IN CHEN, C Z; COOPER, S L

PA (CHEN-I) CHEN C Z; (COOP-I) COOPER S L

CYC 1

PI US 2003082133 A1 20030501 (200356)* 7

ADT US 2003082133 A1 Provisional US 2000-210888P 20000609, Cont of US 2001-877931 20010608, US 2002-309628 20021204

PRAI US 2000-210888P 20000609; US 2001-877931 20010608;

US 2002-309628 20021204

AB US2003082133 A UPAB: 20030903

NOVELTY - The dendrimer biocide-silver nanocomposite composition comprises a **quaternary ammonium** dendrimer biocide and silver ions associated with the biocide.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) preparation of dendrimer biocide-silver nanocomposite which involves adding excess silver nitrate to a dendrimer biocide solution. The chloride ion of the biocide is converted to a nitrate ion and the precipitated silver chloride is removed. Remaining silver nitrate in the solution is removed by adding excess sodium chloride to the supernatant liquid and remaining sodium chloride is removed by dia-filtration; and

(2) method of controlling growth of microorganism which involves exposing the microorganism to nanocomposite composition.

USE - As potent **antimicrobial** agents, in combating biological warfare weapons. The compound is used in hand wash formulation, protective coatings or paints, personal products like cosmetics, industrial products, hospital products, sanitation of swimming pools and spas, and for soldiers' uniforms impregnated with the compound.

ADVANTAGE - The dendrimer biocides are capable of killing anthrax spores since the synergy between the biocide and the silver ion has great potential for denaturing spores. Since spores are used as biological weapons, the biocide is useful in combating biological warfare weapons. The biocide is non-reactive and virtually non-toxic to human skin. Hence, the compound is used in hand wash formulations. The compound is also environmentally stable.

Dwg.0/1

L27 ANSWER 19 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 2003-605485 [57] WPIX
 CR 1999-478782 [40]
 DNN N2003-482683 DNC C2003-164759
 TI **Antimicrobial** product, e.g. catheter, comprises porous substrate and monomeric, polymerizable **quaternary ammonium** salt impregnated in pores of substrate.
 DC A96 B07 D22 E11 P42
 IN MEIER, J F; MERKER, R L; MORGAN, H C
 PA (BIOS-N) BIOSAFE INC
 CYC 1
 PI US 6572926 B1 20030603 (200357)* 8
 ADT US 6572926 B1 CIP of US 1997-996749 19971223, US 2000-710967 20001109
 FDT US 6572926 B1 CIP of US 6146688
 PRAI US 2000-710967 20001109; US 1997-996749 19971223
 AB US 6572926 B UPAB: 20030906
 NOVELTY - **Antimicrobial** product comprises a porous substrate and a monomeric, polymerizable **quaternary ammonium** salt (I) impregnated in the pores of the substrate by exposing the substrate to a solvent comprising (I), permitting (I) to be absorbed by the substrate and polymerizing (I) so that an interpenetrating network is formed with the substrate.
 ACTIVITY - Antibacterial.
 No biological data given.
 MECHANISM OF ACTION - None given.
 USE - Used as an **antimicrobial** product, particularly catheters, coatings and food processing belts.
 ADVANTAGE - The **antimicrobial** product provides an **antimicrobial** property that is non-leaching and not dependent on antibiotic drugs.

Dwg.0/0

L27 ANSWER 20 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 2003-771285 [73] WPIX
 DNN N2003-617976 DNC C2003-212324

TI Textile for socks, tights, stocking, panty hose and towel, is treated with **quaternary ammonium** salt of ethoxylated phosphorus compound.

DC A14 A23 A25 E19 F06 P21

PA (DUPO) DU PONT TORAY CO LTD

CYC 1

PI JP 2003119669 A 20030423 (200373)* 7

ADT JP 2003119669 A JP 2001-320283 20011018

PRAI JP 2001-320283 20011018

AB JP2003119669 A UPAB: 20031112

NOVELTY - A textile comprises a **quaternary ammonium** salt of an ethoxylated phosphorus compound (I) which is adhered to the textile.

DETAILED DESCRIPTION - A textile comprises a **quaternary ammonium** salt which is adhered to the textile. The **quaternary ammonium** salt is of formula (I).

R1, R2 = 8-18C alkyl or alkenyl;

R3, R4 = (m)ethyl;

R5 = 1-18C alkyl;

m = 1-20; and

n = 1 or 2.

USE - Textile for socks (claimed), tights, stocking, panty hose and towel.

ADVANTAGE - The textile and sock have excellent wash resistance and antistatic or **antimicrobial** property. Generation of static during attachment or detachment of textile is suppressed. The textile has excellent softness without any cracks.

Dwg.0/0

L27 ANSWER 21 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2003-649060 [62] WPIX

DNN N2003-516310 DNC C2003-177843

TI **Polyurethane** foam for fungicidal shoe soles comprises alkyl or alkoxy **quaternary ammonium** sulfate.

DC A25 A83 E16 P22

PA (DNIN) DAINIPPON INK & CHEM INC

CYC 1

PI JP 2003096293 A 20030403 (200362)* 7

ADT JP 2003096293 A JP 2001-296415 20010927

PRAI JP 2001-296415 20010927

AB JP2003096293 A UPAB: 20030928

NOVELTY - A **polyurethane** foam comprises an alkyl or alkoxy **quaternary ammonium** sulfate.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for manufacture of **polyurethane** foam. A compound having at least two active hydrogen and an organic polyisocyanate compound are reacted in the presence of alkyl or alkoxy **quaternary ammonium** sulfate and foaming agent.

USE - For shoe soles (claimed).

ADVANTAGE - The **polyurethane** foam as excellent **antimicrobial**, anti-mold property and mechanical strength without coloring. Color-change of urethane molded product is prevented.

Dwg.0/0

L27 ANSWER 22 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2003-515265 [49] WPIX

DNN N2003-408842 DNC C2003-138311

TI Device for use in monitoring a swab method, includes a first substrate substantially adjacent a second substrate, and a test material including a

predetermined analyte, disposed between the first and second substrates.

DC A96 B04 D16 S03
 IN RAMSAY, C M; SIMPSON, W J
 PA (BIOT-N) BIOTRACE LTD
 CYC 30
 PI EP 1298069 A2 20030402 (200349)* EN 7
 R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LT LU LV MC
 MK NL PT RO SE SI SK TR
 ADT EP 1298069 A2 EP 2002-256712 20020926
 PRAI GB 2001-23151 20010926
 AB EP 1298069 A UPAB: 20030731
 NOVELTY - A device (I) (1) for use in monitoring a swab method, includes a first substrate (2) substantially adjacent a second substrate, where the first and second substrates accommodate a test material between them.
 DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for manufacturing (I) for use in monitoring a swab technique, which involves providing a first substrate, applying a test material to a portion of the first substrate, covering at least the test material on the first substrate with a second substrate, and joining the second substrate to the first substrate so as to encapsulate the test material between the first substrate and the second substrate.
 USE - (I) is useful for monitoring a swab technique, which involves providing (I), where the test material includes a predetermined amount of an analyte, swabbing the test material with a swab, and monitoring the amount of analyte present on the swab. The test material is disposed between the first substrate and second substrate under aseptic conditions (all claimed).
 ADVANTAGE - The device provides a standard surface for use in monitoring the swab technique.
 DESCRIPTION OF DRAWING(S) - The figure shows the plan view of the device for monitoring a swab method.
 device 1
 first substrate 2
 Dwg.1/2

L27 ANSWER 23 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 2002-627299 [67] WPIX
 DNC C2004-012604
 TI Floor coating system has an aziridine-crosslinked, non-removable base layer and a removable upper sacrificial layer which is aziridine-free and of low discoloration susceptibility to **antimicrobials**.
 DC A14 A25 A82 D22 E19 G02
 IN DECKER, M; FAUBEL, H; ROGMANN, K; SCHEUVENS, U
 PA (ECOL-N) ECOLAB GMBH & CO OHG; (DECK-I) DECKER M; (FAUB-I) FAUBEL H; (ROGM-I) ROGMANN K; (SCHE-I) SCHEUVENS U; (HENK) HENKEL ECOLAB GMBH & CO OHG
 CYC 22
 PI WO 2002050205 A1 20020627 (200267)* GE 22
 RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
 W: PL US
 DE 10064413 A1 20020711 (200267)
 EP 1343852 A1 20030917 (200362) GE
 R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR
 US 2004054067 A1 20040318 (200421)
 ADT WO 2002050205 A1 WO 2001-EP14561 20011212; DE 10064413 A1 DE 2000-10064413 20001221; EP 1343852 A1 EP 2001-271418 20011212; WO 2001-EP14561 20011212; US 2004054067 A1 WO 2001-EP14561 20011212, US 2003-451466 20031014
 FDT EP 1343852 A1 Based on WO 2002050205
 PRAI DE 2000-10064413 20001221

AB WO 200250205 A UPAB: 20040426

NOVELTY - A floor-coating system comprises:

(A) a crosslinked base layer which is non-removable by wet chemical means and which comprises, together or separately, a polymer wax dispersion and aziridine and optionally a matting agent; and

(B) a sacrificial top layer which is wet chemically-removable and which is an aziridine-free agent comprising a standard floor-care component, especially a polymer wax dispersion.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for treatment of the system with a cleaning agent or disinfectant containing an **antimicrobial** component which is an alcohol, aldehyde, acid, carboxylic ester, acid amide, phenol (or derivative), diphenyl, diphenylalkane, urea derivative, O- or N-acetal or -formal, benzamidine, isothiazoline, phthalimide- or pyridine-derivative, surfactant, **quat. ammonium** compound, alkylamine, guanidine, amphoteric compound, quinoline, 1,2-dibromo-2,4-dicyanobutane, iodo-2-propinyl-butyl-carbamate, I2, iodophore or peroxide.

USE - Floor covering.

ADVANTAGE - The discoloration susceptibility of upper layer (B) to **antimicrobial** components is reduced.

Dwg.0/0

L27 ANSWER 24 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2002-382414 [41] WPIX

DNC C2002-107707

TI Polymeric composition for inhibiting, e.g. microorganism growth, comprises **polyurethane** polymer having pendant **quaternary ammonium** salts.

DC A25 A93 D22 F06 F09 G02

IN JACOBS, J L; SCHOLZ, M T; SENGUPTA, A; TAUTVYDAS, K J

PA (MINN) 3M INNOVATIVE PROPERTIES CO

CYC 96

PI WO 2002010244 A2 20020207 (200241)* EN 55

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU
SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

AU 2001071945 A 20020213 (200242)

EP 1311572 A2 20030521 (200334) EN

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI TR

JP 2004511582 W 20040415 (200426) 96

ADT WO 2002010244 A2 WO 2001-US21666 20010709; AU 2001071945 A AU 2001-71945
20010709; EP 1311572 A2 EP 2001-951005 20010709, WO 2001-US21666 20010709;

JP 2004511582 W WO 2001-US21666 20010709, JP 2002-515971 20010709

FDT AU 2001071945 A Based on WO 2002010244; EP 1311572 A2 Based on WO
2002010244; JP 2004511582 W Based on WO 2002010244

PRAI US 2000-626026 20000727

AB WO 200210244 A UPAB: 20020701

NOVELTY - A polymeric composition comprises a **polyurethane** polymer derived from a polyisocyanate compound and a polyactive hydrogen compound. The **polyurethane** polymer is partially end capped with a group including an **antimicrobial quaternary ammonium** group. The composition is capable of forming a self-supporting film.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(A) a method of preventing the growth of microorganisms on a

substrate comprising coating the substrate with an aqueous dispersion of a biocidal **polyurethane** polymer comprising the **polyurethane** composition; and

(B) an article comprising a substrate coated with the polymeric composition.

USE - For inhibiting the growth of microorganisms, such as, Gram positive and Gram negative bacteria, fungi, mildew, mold and algae on substrates, e.g., roofing felt, roofing shingle, roofing granules, tile, concrete, metal, polymeric, cloth, fibers, wood, or medical article (claimed).

ADVANTAGE - The inventive polymers are relatively easy to make in a pure form with a low level of residual, extractable material, and with no residual, extractable material. The **antimicrobial** activity is not leachable yet durable.

Dwg.0/0

L27 ANSWER 25 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 2003-370691 [35] WPIX
 DNC C2003-098112
 TI Composition in form of aqueous dispersion, used in cosmetic applications such as hair composition which does not have reshapable effect, comprises functionalized **polyurethane**-urea polymer(s).
 DC A96 D21 E19
 IN KANTNER, S S; KREPSKI, L R; LEWANDOWSKI, K M; MALLO, R A
 PA (MINN) 3M INNOVATIVE PROPERTIES CO
 CYC 97
 PI US 2002146382 A1 20021010 (200335)* 14
 WO 2003011937 A1 20030213 (200335) EN
 RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
 NL OA PT SD SE SL SZ TR TZ UG ZW
 W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
 DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
 KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU
 SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
 EP 1362072 A1 20031119 (200377) EN
 R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
 RO SE SI TR
 BR 2001016773 A 20040113 (200409)
 CN 1487962 A 20040407 (200441)
 JP 2004521957 W 20040722 (200448) 68
 AU 2001263425 A1 20030217 (200452)
 KR 2004067846 A 20040730 (200475)
 MX 2003006295 A1 20040501 (200482)
 ADT US 2002146382 A1 US 2001-771054 20010126; WO 2003011937 A1 WO 2001-US16926 20010524; EP 1362072 A1 EP 2001-937718 20010524; WO 2001-US16926 20010524; BR 2001016773 A BR 2001-16773 20010524; WO 2001-US16926 20010524; CN 1487962 A CN 2001-822306 20010524; JP 2004521957 W WO 2001-US16926 20010524; JP 2003-517123 20010524; AU 2001263425 A1 AU 2001-263425 20010524; KR 2004067846 A KR 2003-709894 20030725; MX 2003006295 A1 WO 2001-US16926 20010524; MX 2003-6295 20030714
 FDT EP 1362072 A1 Based on WO 2003011937; BR 2001016773 A Based on WO 2003011937; JP 2004521957 W Based on WO 2003011937; AU 2001263425 A1 Based on WO 2003011937; MX 2003006295 A1 Based on WO 2003011937
 PRAI US 2001-771054 20010126
 AB US2002146382 A UPAB: 20030603
 NOVELTY - Composition in the form of an aqueous dispersion comprises at least one **polyurethane**-urea polymer that is functionalized with at least one hydrolyzed or hydrolyzable silyl group. The composition is used in cosmetic applications. The cosmetic application is a hair care

composition which does not have a reshapable effect.

USE - Used in cosmetic applications such as creams, emulsions, lotions, gels and oils for the skin; face masks such as chemical peeling products; tinted bases such as liquids, pastes; make-up powders, after-bath powders, hygienic powders; toilet soaps, deodorant soaps; perfumes, toilet waters, cologne; bath and shower preparations such as salts, foams; depilatories, deodorants and antiperspirants; hair care products such as hair tints and bleaches; but not reshapable hairstyling compositions; products for making-up and removing make-up from the face and the eyes, products intended for application to the lips; products for nail care and nail make-up, products for external intimate hygiene; sunbathing products; products for tanning without sun; skin-whitening products and anti-wrinkling products.

ADVANTAGE - The composition does not rely on the use of a UV light source or the use of hardeners, which may lead to processing and handling problems such as limited pot life and potential toxicity problems. This composition also does not rely the use of multi-valent metallic cations to ionically cross-link negatively charged moieties, such as sulfonates, and carboxylates. Such cations may destabilize the dispersion and add unwanted color to the dried film. The composition does not rely on the use of organic coalescing agents. Such agents may have drawbacks, such as imparting an undesirable odor to the composition and a prolonged drying time to the film. The composition provides improved resistance against abrasion, transfer, water, perspiration and humidity while having excellent gloss, feel and adhesion.

Dwg.0/0

L27 ANSWER 26 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2002-267440 [31] WPIX

CR 2003-596948 [56]

DNC C2002-079509

TI A dendrimer biocide-silver nanocomposite composition useful for controlling the growth of a microorganism, comprises a **quaternary ammonium** dendrimer biocide and silver ions.

DC A96 B06 D22

IN CHEN, C Z; COOPER, S L

PA (CHEN-I) CHEN C Z; (COOP-I) COOPER S L; (UYDE) UNIV DELAWARE

CYC 1

PI US 2002022012 A1 20020221 (200231)* 7

US 6579906 B2 20030617 (200341)

ADT US 2002022012 A1 Provisional US 2000-210888P 20000609, US 2001-877931 20010608; US 6579906 B2 Provisional US 2000-210888P 20000609, US 2001-877931 20010608

PRAI US 2000-210888P 20000609; US 2001-877931 20010608

AB US2002022012 A UPAB: 20030903

NOVELTY - A dendrimer biocide-silver nanocomposite composition (I) comprises a **quaternary ammonium** dendrimer biocide and silver ions associated with the biocide.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for

(1) a process of preparing (I) comprising:

(a) adding excess silver nitrate to a dendrimer biocide solution;

(b) removing any precipitated silver chloride;

(c) removing any remaining silver nitrate in the solution; and

(d) diafiltering to remove remaining silver nitrate; and

(2) a method of controlling the growth of a microorganism comprising using (I).

ACTIVITY - **Antimicrobial**.

The **antimicrobial** properties of these composites were evaluated using a bioluminescence method. The Ag-200 (when a 200 %

stoichiometric amount of silver nitrate is used) formulation was observed to be much more potent than the dendrimer biocide alone. 2 ppm of D3ClNC8 reduced the bioluminescence to only 10 % of the bioluminescence of the control. Formulation Ag-500, containing only 0.8 ppm of D3ClNC8 and less than 0.8 ppm of Ag+ reduced the bioluminescence to 0.1 % of the control. Ag-200 with 0.8 ppm of D3ClNC8 and less than 0.3 ppm of Ag+ can reduce the bioluminescence to 0.001 % of the control.

MECHANISM OF ACTION - None given in the source material.

USE - For controlling the growth of a microorganism, where the microorganism is acidogenic gram-positive cocci, gram-negative anaerobic oral bacteria, group A streptococci, enteric bacteria, gram-negative rods, and gram-positive cocci, particularly streptococcus, staphylococci, haemophilus influenzae, escherichia coli, P. aeruginosa, burkholderia cepacia, pseudomonas pseudomallei, C. albicansm, staphylococcus epidermidis, and S. aureus. The microorganism is a spore corresponding to B. anthracis or anthrax (claimed). The biocide can be incorporated into protective coating or paints, personal products such as cosmetics, industrial products, hospital products, and sanitation of swimming pools and spas. They can also be immobilized onto the surface to create efficient antimicrobial surfaces for use as biomaterials, antifouling paints and other similar devices.

ADVANTAGE - The nanocomposites can be stable for more than 3 months compared to several-hour stability of other dendrimer-nanocomposite preparations.

Dwg.0/1

L27 ANSWER 27 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2003-165333 [16] WPIX

DNC C2003-042766

TI New **quaternary ammonium** functionalized dendrimer, useful for controlling growth of microorganisms e.g. gram positive, gram negative bacteria in industrial, medical and home applications.

DC A96 D15 D21 D22 K02

IN CHEN, C Z; COOPER, S L

PA (UYDE) UNIV DELAWARE

CYC 1

PI US 6440405 B1 20020827 (200316)* 12

ADT US ~~6440405~~ B1 Provisional US 1999-137927P 19990607, US 2000-588585 20000606

PRAI US 1999-137927P 19990607; US 2000-588585 20000606

AB US 6440405 B UPAB: 20030307

NOVELTY - A **quaternary ammonium** functionalized dendrimer is new.

DETAILED DESCRIPTION - A **quaternary ammonium** functionalized dendrimer of compound of formula (I) is new.

D = dendrimer;

n = generation number of functionalized dendrimer selected from 1-15;

z = integer at most 2(n+1);

x = anion;

R = linking group; and

A, B, Y = 1-32C alkyl, 1-32C aryl, or chloromethyl.

An INDEPENDENT CLAIM is also included for a method of controlling the growth of a microorganism by exposing the microorganism to a **quaternary ammonium** functionalized dendrimer of formula (I).

USE - For reducing growth of microorganisms, such as acidogenic gram positive cocci, gram-negative anaerobic oral bacteria, Group A streptococci, enteric bacteria, gram-negative rods, and gram-positive cocci, Streptococcus, Staphylococci, Haemophilus influenzae, Escherichia

coli, *P. aeruginosa*, *Burkholderia cepacia*, *Pseudomonas pseudomallei*, *C. albicansm*, *Staphylococcus epidennidis*, and *S. aureus*. The spore corresponds to *B. anthracis* or anthrax (claimed) in industrial, medical and home use, as protective coatings such as paints, hand wash formulations, for use in ointments and related topical applications, cosmetics, cleaning and/or disinfectant/sanitation products, and sanitation of recreational water such as swimming pools and spas and as a component in coating fibers and filters.

ADVANTAGE - The dendrimers backwoods are non-reactive and are virtually non-toxic to human skin. The functionalized dendrimers can also be immobilized on the surface of materials to create efficient **antimicrobial** environments in a wide variety of applications including garments for protective use as well as biocides and prosthetic devices for medical use. The dendrimer inhibited the growth of *Staphylococcus aureus* as low as 1 ppm and effectively killed 10 ppm in 60 minutes. The dendrimers are effective and have strong potency on gram positive bacteria.

Dwg.0/0

L27 ANSWER 28 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2003-454968 [43] WPIX

DNC C2003-120888

TI Method for preparing far-infrared, **antimicrobial**, aromatic, aqueous coating.

DC A25 A82 D22 F06 G02

IN KIM, C S; PARK, E Y; PARK, J J

PA (KIMC-I) KIM C S; (PARK-I) PARK E Y; (PARK-I) PARK J J

CYC 1

PI KR 2002042919 A 20020608 (200343)*

ADT KR 2002042919 A KR 2000-72278 20001201

PRAI KR 2000-72278 20001201

AB KR2002042919 A UPAB: 20030707

NOVELTY - Provided is a method for preparing a far-infrared, **antimicrobial**, aromatic, aqueous coating which can impart fragrance, **antimicrobial**, and far-infrared ray emitting properties to fiber article merely by a single immersion process.

DETAILED DESCRIPTION - The coating consists of 0.1-5% of microcapsule of organic quaternary silicon **antimicrobial**(TPDAC); 90-99% of far-infrared ray emitting aqueous coating; and 0.01-1% of aromatics. The microcapsule of organic quaternary silicon **antimicrobial** is produced by mixing-dispersing a fluorine-based **polyurethane** resin, organic **quaternary ammonium** silicon(TPDAC) and cyclohexane in aqueous solvent of gelatin while slowly dropping 30% aqueous propylene glycol solution, and elevating the temperature of the dispersion to 50-60 deg. C.

Dwg.0/0

L27 ANSWER 29 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2002-540870 [58] WPIX

DNC C2002-153360

TI Cleaning of fiber or textile fabric, involves removing foreign materials such as dirt, blotches and refuses adhered to fiber, using mixture containing high pressure carbon dioxide and polar solvent.

DC A87 D25 E19 E24 F06

PA (MISH-I) MISHIMA K

CYC 1

PI JP 2002004169 A 20020109 (200258)* 9

ADT JP 2002004169 A JP 2000-224631 20000620

PRAI JP 2000-224631 20000620

AB JP2002004169 A UPAB: 20030729

NOVELTY - Fiber, textile fabric, blend textile fabric or sewing goods is cleaned using a mixture containing high pressure carbon dioxide (CO₂) and polar solvent, and foreign materials such as blotches, dirt and refuse adhered to fiber are removed. The mixture of high pressure CO₂ and polar solvent shows a high solvent power. The high pressure CO₂ is super-critical, sub-critical or liquid CO₂.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(i) Dyeing fiber by dissolving dye-stuff in a mixture containing high pressure CO₂ and polar solvent. Fiber, textile fabric, blend textile fabric or sewing goods is then dyed using the mixture containing dye-stuff, high pressure CO₂ and polar solvent;

(ii) textile finishing by dissolving a water repellent agent in a mixture containing high pressure CO₂ and polar solvent. Fiber, textile fabric, blend textile fabric or sewing goods is then water-repellent finished using a mixture containing water repellent agent, high pressure CO₂ and polar solvent.

USE - For cleaning fiber, textile fabric, blend textile fabric or sewing goods, using mixture containing high pressure carbon dioxide and polar solvent.

ADVANTAGE - Washing, dyeing, water repellent finishing, softening and antimicrobial processing of fiber are performed eco-friendly.

DESCRIPTION OF DRAWING(S) - The figure shows the apparatus for washing, dyeing, water repellent finishing, softening and antimicrobial processing of fiber, using high pressure carbon dioxide.

Dwg.1/4

L27 ANSWER 30 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2003-048239 [05] WPIX

DNC C2003-012506

TI Stable colloidal aqueous suspensions of nanospheres of lipophilic active material stabilized by colloidal particles of a water-dispersible polymer.

DC A96 B05 D21 E19

IN SIMONNET, J; SIMONNET, J T; SIMONNET, J

PA (OREA) L'OREAL SA; (SIMO-I) SIMONNET J

CYC 28

PI EP 1228746 A1 20020807 (200305)* FR 20

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI TR

FR 2820320 A1 20020809 (200305)

JP 2002322016 A 20021108 (200305) 13

US 2002142017 A1 20021003 (200305)

ADT EP 1228746 A1 EP 2002-290213 20020130; FR 2820320 A1 FR 2001-1438

20010202; JP 2002322016 A JP 2002-26962 20020204; US 2002142017 A1 US
2002-60280 20020201

PRAI FR 2001-1438 20010202

AB EP 1228746 A UPAB: 20030121

NOVELTY - Stable colloidal suspensions comprising a continuous aqueous phase, nanospheres of lipophilic active material having a particle size of 0.01 - 1 micro m, a surfactant, and colloidal particles of a water-dispersible polymer having a particle size of 10 - 500 nm.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for topical compositions containing these suspensions together with a physiologically-acceptable medium.

ACTIVITY - Dermatological; Cytostatic; Analgesic; Antibacterial; Anti-inflammatory.

MECHANISM OF ACTION - None given.

USE - Cosmetic and dermatological, the precise use depending upon the nature of the active material, for example when a DHEA derivative is used the compositions have anti-aging properties and may be used to treat dry skin, wrinkles, and alopecia. When pentatriterpene acids are used, the compositions have anti-inflammatory hepatoprotecting, diuretic, analgesic, **antimicrobial**, enzyme-inhibiting and antitumor activity.

ADVANTAGE - Greater stability than known formulations.

Dwg.0/0

L27 ANSWER 31 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 2002-437056 [47] WPIX
 DNC C2002-124288
 TI Device for preventing and/or minimizing appearance of scars, comprises silicone infused with antioxidant and/or **antimicrobial**.
 DC A96 D21 D22 P32 P34
 IN BLAINE, R
 PA (BLAI-I) BLAINE R
 CYC 27
 PI EP 1186290 A2 20020313 (200247)* EN 5
 R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
 RO SE SI TR
 US 6572878 B1 20030603 (200339)
 ADT EP 1186290 A2 EP 2001-307646 20010907; US 6572878 B1 US 2000-656852
 20000907
 PRAI US 2000-656852 20000907
 AB EP 1186290 A UPAB: 20020725
 NOVELTY - The device for preventing and/or minimizing the appearance of the scars, comprises a silicone infused with antioxidant and/or **antimicrobial**.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) Method for preventing and/or minimizing the appearance of the scars which involves applying the device to an affected area of skin;
- (2) Manufacture of the device for preventing and/or minimizing the appearance of the scars, which involves infusing the silicone sheet with antioxidant and/or **antimicrobial**; and
- (3) Improved silicone sheet for treating scar tissue comprising a silicone sheet impregnated with antioxidant and/or **antimicrobial**

USE - For preventing and/or minimizing the appearance of old and new hypertrophic and keloid scars, scars which protects the skin and absorbs skin moisture, scars which discourages **microbial** growth, and scars which slows free radical reactions on the treated area. Used for scar tissue treatment.

ADVANTAGE - The device comprising silicone sheet impregnated with antioxidant and/or **antimicrobial** prevents the formation of scars and/or flatten and fade the appearance of the scars. The antioxidant slows down free radical reactions on the skin, thereby promoting skin healing. The **antimicrobial** prevents the accumulation of **microbes** on the skin often caused by silicone occlusion. The device self-adheres to the skin, thereby eliminating the need for separate adherents, such as bandages and medical tapes. Usage of the device is economical and convenient.

Dwg.0/0

L27 ANSWER 32 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 2001-343066 [36] WPIX
 DNN N2001-248470 DNC C2001-106132
 TI Transdermal composition comprises a carrier, a drug, and a

quaternary ammonium salt in an amount sufficient to enhance penetration of the drug with reduced skin irritation.

DC A96 B07 D22 P32
 IN EBERT, C D; FIKSTAD, D; NILSSEN, L R; VENKATESHWARAN, S
 PA (WATS-N) WATSON PHARM INC; (EBER-I) EBERT C D; (FIKS-I) FIKSTAD D;
 (NILS-I) NILSSEN L R; (VENK-I) VENKATESHWARAN S
 CYC 95
 PI WO 2001017472 A1 20010315 (200136)* EN 65
 RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
 NL OA PT SD SE SL SZ TZ UG ZW
 W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM
 DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
 LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE
 SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
 AU 2000073611 A 20010410 (200137)
 EP 1217975 A1 20020703 (200251) EN
 R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
 RO SE SI
 US 2003091620 A1 20030515 (200335)
 JP 2003532629 W 20031105 (200377) 69
 AU 773778 B2 20040603 (200465)
 ADT WO 2001017472 A1 WO 2000-US24690 20000908; AU 2000073611 A AU 2000-73611
 20000908; EP 1217975 A1 EP 2000-961691 20000908, WO 2000-US24690 20000908;
 US 2003091620 A1 Provisional US 1999-153001P 19990908, Provisional US
 1999-153008P 19990908, Provisional US 1999-153015P 19990908, Div ex US
 2000-657080 20000907, US 2002-105032 20020321; JP 2003532629 W WO
 2000-US24690 20000908, JP 2001-521266 20000908; AU 773778 B2 AU 2000-73611
 20000908
 FDT AU 2000073611 A Based on WO 2001017472; EP 1217975 A1 Based on WO
 2001017472; JP 2003532629 W Based on WO 2001017472; AU 773778 B2 Previous
 Publ. AU 2000073611, Based on WO 2001017472
 PRAI US 2000-657080 20000907; US 1999-153001P 19990908;
 US 1999-153008P 19990908; US 1999-153015P 19990908;
 US 2002-105032 20020321
 AB WO 200117472 A UPAB: 20010628

NOVELTY - Transdermal composition (I) comprises a pharmaceutically acceptable carrier, a drug, and a **quaternary ammonium** salt in an amount sufficient to enhance penetration of the drug with reduced skin irritation.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) a method of reducing skin irritation of a transdermal composition by incorporating a **quaternary ammonium** salt;

(2) a method of synergistically enhancing transdermal penetration of a drug in a transdermal composition by incorporating a **quaternary ammonium** salt; and

(3) a method of enhancing transdermal delivery of a drug and reducing skin irritation associated with the transdermal delivery by applying (I) to a selected skin surface.

ACTIVITY - Antibacterial; antiinflammatory; dermatological.

In vitro testing for **antimicrobial** efficacy against E3 gram positive cocci in 1.1 cm² transdermal matrix samples was carried out. 0.4% benzalkonium chloride and benzethonium chloride had a 15 mm and 17 mm zone of inhibition, compared to 0 mm for benzoic acid and 0 mm (and **microbial** growth) for the control (adhesive only).

MECHANISM OF ACTION - None given.

USE - For enhancing transdermal delivery of a drug and reducing skin irritation (especially erythema, papule and/or vesicle, or irritation caused by **microbial** (Gram positive bacterial) growth) associated with the transdermal delivery.

ADVANTAGE - Transdermal delivery of a drug is enhanced, and skin irritation associated with the transdermal delivery is reduced. Penetration enhancement is 10-100, preferably 10-50% better than would be expected of an additive effect from using (A) and co-enhancer.
Dwg.0/0

L27 ANSWER 33 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2001-112499 [12] WPIX
CR 2001-091751 [10]
DNC C2001-033517
TI Method for controlling the flux of penetrants across an adaptable semi-permeable barrier is useful for administering an agent to a mammalian body or a plant and for generating an immune response by vaccinating the mammal.
DC A18 A28 A96 B05 B07 D16 D22
IN CEVC, G; RICHARDSEN, H; WEILAND-WAIBEL, A; WEILAND-WEIBEL, A
PA (IDEA-N) IDEA AG; (CEVC-I) CEVC G; (RICH-I) RICHARDSEN H; (WEIL-I) WEILAND-WAIBEL A
CYC 95
PI WO 2001001963 A1 20010111 (200112)* EN 110
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM
DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE
SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2000061557 A 20010122 (200125)
BR 2000012178 A 20020312 (200226)
EP 1189598 A1 20020327 (200229) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI
CZ 2002000038 A3 20020515 (200241)
CN 1359288 A 20020717 (200268)
HU 2002001454 A2 20021228 (200308)
JP 2003503442 W 20030128 (200309) 109
US 2003099694 A1 20030529 (200337)
AU 779765 B2 20050210 (200527)
ADT WO 2001001963 A1 WO 2000-EP6367 20000705; AU 2000061557 A AU 2000-61557 20000705; BR 2000012178 A BR 2000-12178 20000705; WO 2000-EP6367 20000705; EP 1189598 A1 EP 2000-947939 20000705; WO 2000-EP6367 20000705; CZ 2002000038 A3 WO 2000-EP6367 20000705; CZ 2002-38 20000705; CN 1359288 A CN 2000-809916 20000705; HU 2002001454 A2 WO 2000-EP6367 20000705; HU 2002-1454 20000705; JP 2003503442 W WO 2000-EP6367 20000705, JP 2001-507458 20000705; US 2003099694 A1 Cont of WO 2000-EP6367 20000705, US 2002-37480 20020104; AU 779765 B2 AU 2000-61557 20000705
FDT AU 2000061557 A Based on WO 2001001963; BR 2000012178 A Based on WO 2001001963; EP 1189598 A1 Based on WO 2001001963; CZ 2002000038 A3 Based on WO 2001001963; HU 2002001454 A2 Based on WO 2001001963; JP 2003503442 W Based on WO 2001001963; AU 779765 B2 Previous Publ. AU 2000061557, Based on WO 2001001963
PRAI WO 1999-EP4659 19990705
AB WO 200101963 A UPAB: 20050427
NOVELTY - A method for controlling the flux of penetrants across an adaptable semi-permeable porous barrier is new.
DETAILED DESCRIPTION - A method for controlling the flux of penetrants across an adaptable semi-permeable membrane comprises suspending the penetrants in a polar liquid in the form of fluid droplets surrounds by a membrane-like coating comprising at least two kinds of amphiphilic substances with a tendency to aggregate, selecting a dose of

the penetrants to control the flux of the penetrants across the barrier and applying the selected dose of the formulation onto the area of the barrier. The amphiphilic substances differ by a factor of at least 10 in solubility in the polar liquid and the homo-aggregates of the more soluble substance and hetero-aggregates have a preferred average diameter smaller than the diameter of the homo-aggregates of the less soluble substance. The more soluble substance tends to solubilize the droplet and comprises up to 99% of the solubilizing concentration or saturating concentration in the unstabilized droplet. The presence of the more soluble substance lowers the average elastic energy of the coating by at least 5 times preferably more than 10 times the average elastic energy of red blood cells or of phospholipid bilayers with fluid aliphatic chains. The penetrants are able to transport agents through the pores of the barrier or enable agent permeation through the pores after the penetrants have entered the pores.

INDEPENDENT CLAIMS are included for:

- (i) a kit containing the formulation;
- (ii) a patch containing the formulation; and
- (iii) a method of administering an agent to a mammalian body or plant comprising the novel method.

USE - The method is useful for administering an agent to a mammalian body or a plant, for generating an immune response by vaccinating the mammal and for treating inflammatory disease, dermatosis, kidney or liver failure, adrenal insufficiency, aspiration syndrome, Behcet syndrome, bites and stings, blood disorders (cold-hemagglutinin disease), hemolytic anaemia, hypereosinophilic, hypoplastic anaemia, macroglobulinaemia and thrombocytopenic purpura), bone disorders, cerebral oedema, Cogan's syndrome, congenital adrenal hyperplasia, connective tissue disorders (lichen, lupus erythematosus, polymyalgia rheumatica, polymyositis and dermatomyositis), epilepsy, eye disorders (cataracts), Graves' ophthalmopathy, hemangioma, herpes infections, neuropathies, retinal vasculitis, scleritis, gastro-intestinal disorders (inflammatory bowel disease, nausea and oesophageal damage), hypercalcaemia, infections, Kawasaki disease, myasthenia gravis, pain syndromes, polyneuropathies, pancreatitis, respiratory disorders (asthma), rheumatoid disease, osteoarthritis, rhinitis, sarcoidosis, skin diseases, alopecia, eczema, erythema multiforme, lichen, pemphigus and pemphigoid, psoriasis, pyoderma gangrenosum, urticaria and thyroid and vascular disorders.

ADVANTAGE - Increasing the applied dose above a threshold level affects both the drug/penetrant distribution and also determines the rate of penetrant transport across the barrier.

Dwg.0/14

L27 ANSWER 34 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 2002-170924 [22] WPIX
 DNC C2002-052721
 TI Air filtration filter includes material compounded with charge control agent.
 DC A88 E19 J01
 IN CHAPMAN, R L
 PA (CHAP-I) CHAPMAN R L
 CYC 1
 PI US 2001039879 A1 20011115 (200222)* 11
 ADT US 2001039879 A1 Provisional US 1999-172296P 19991216, US 2000-738052 20001214
 PRAI US 1999-172296P 19991216; US 2000-738052 20001214
 AB US2001039879 A UPAB: 20030513
 NOVELTY - An air filtration filter having enhanced electrostatic charge comprising a material utilized in the filter compounded with a charge

control agent.

USE - As air filtration filter.

ADVANTAGE - The inventive filter has an enhanced electrostatic charge and increased air filtration efficiencies.

Dwg.0/0

L27 ANSWER 35 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 2001-456391 [49] WPIX
 CR 2000-183516 [17]; 2000-195930 [18]; 2000-195931 [18]; 2000-225013 [20];
 2000-238125 [21]; 2001-243214 [25]; 2001-353024 [37]; 2002-074562 [10];
 2002-113293 [15]; 2003-567204 [53]
 DNN N2001-338174 DNC C2001-137946
 TI Amusement article useful as a toy for a domestic animal comprises a
 micro-inhibiting agent or property that is incorporated into at least one
 of an outer casing and an inner filling.
 DC A86 D22 E19 F06 P14
 IN DENESUK, M; UHLMANN, E V
 PA (SEEF-N) SEEFAR TECHNOLOGIES INC
 CYC 1
 PI US 6240879 B1 20010605 (200149)* 24
 ADT US 6240879 B1 Provisional US 1997-43014P 19970415, US 1998-59826 19980414
 PRAI US 1997-43014P 19970415; US 1998-59826 19980414
 AB US 6240879 B UPAB: 20030820

NOVELTY - A textile-based article comprises an outer textile casing (a) formed of a tough, chew-resistant material; an inner filling (b) encapsulated by (a) and a micro-inhibiting agent or property (c) that is applied to at least one of (a) and (b). (a) has an enclosed geometric shape in the form of a small article of a size that is adapted to lure or be fetched by a domestic animal.

USE - For playing with or retrieved by, or for enticing a domestic animal (claimed) i.e pets as toys.

ADVANTAGE - The micro-inhibiting agent or property is non-toxic and carcinogenic when ingested by domestic animals at the levels used in the amusement article, thus inhibiting the proliferation of **microbes** on, within or around the amusement article. Thus it provides a healthier environment for the pets and their families and in turn diminishes the potential for illness, allergic reactions and general discomfort. It can also inhibit the emission of odors. Since the article is safe and cleaner, one can comfortably use them for longer periods of time. As the articles have a more pleasant scent, and possess longer useful lifetimes, it is more convenient due to fewer washings than articles of the prior art. The bad breath into the mouth of the animals is also reduced. The articles are economically manufactured in the pet product industry and require less amount of the odor-controlling agent as compared to the conventional articles.

Dwg.0/5

L27 ANSWER 36 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 2001-353024 [37] WPIX
 CR 2000-183516 [17]; 2000-195930 [18]; 2000-195931 [18]; 2000-225013 [20];
 2000-238125 [21]; 2001-243214 [25]; 2001-456391 [49]; 2002-074562 [10];
 2002-113293 [15]; 2003-567204 [53]
 DNN N2001-256227 DNC C2001-109344
 TI Textile based bedding article, for domestic animal, comprises inner
 filling mattress enclosed by outer textile casing, and casing, mattress
 has non-toxic or non-carcinogenic **microbe** inhibiting agent or
 property.
 DC A97 D22 F07 P14 P26
 IN DENESUK, M; HINGST, E; SMITH, M; UHLMANN, E V

PA (SEEF-N) SEEFAR TECHNOLOGIES INC

CYC 1

PI US 6196156 B1 20010306 (200137)* 25

ADT US 6196156 B1 Provisional US 1997-43014P 19970415, US 1998-59893 19980414

PRAI US 1997-43014P 19970415; US 1998-59893 19980414

AB US 6196156 B UPAB: 20030820

NOVELTY - Textile-based bedding (10) has a dry inner fibrous filling (14) forming a mattress enclosed by an outer casing (12) made from a tough, chew resistant material in a geometric shape adapted to support a domestic animal. The casing and/or inner filling material has non-toxic and non-carcinogenic **microbe** inhibiting agent (16) or property. The **microbe** inhibiting agent is non-sensitive to animal skin.

DETAILED DESCRIPTION - Textile-based bedding has outer textile casing made from a tough, chew resistant material in a geometric shape adapted to support a domestic animal, dry inner filling, forming a mattress encapsulated by the casing. The outer textile casing and/or inner filling material has a **microbe** inhibiting agent which is non-toxic and non-carcinogenic when ingested by pets. The **microbe** inhibiting agent is non-sensitive to animals skin or any membrane of animal which contacts with the bedding.

An INDEPENDENT CLAIM is also included for the process of imparting **microbe** inhibiting properties to a pet bed which involves applying or incorporating a **microbe**-inhibiting agent to at least one of the outer textile casing and the mattress, so that proliferation of **microbes** is inhibited in an area that contacts a pet which rests on the bedding.

USE - For domestic animals.

ADVANTAGE - The bedding article is inexpensive and durable. The **microbe** inhibiting property is stable even after repeated aggressive washings. The article is **microbe** inhibiting in nature, promotes good hygiene and inhibits the growth of **microbes** which creates an environment suitable for pests, thereby inhibiting proliferation of pests. The bedding diminishes the potential for illness, allergic reaction and discomfort. The **microbe** inhibiting nature of the article inhibits the emission of odor, allowing the article to possess the pleasant or neutral fragrance. The article is clean and safe to use and has longer life time.

DESCRIPTION OF DRAWING(S) - The figure shows sectional view of a bedding article for pet.

Bedding article 10

Outer casing 12

Inner filling 14

Microbe inhibiting agent 16

Dwg.3/7

L27 ANSWER 37 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2002-531180 [57] WPIX

DNN N2002-420648 DNC C2002-150537

TI Humidity controlling decorative material, used as internal equipment construction material for walls, comprises urethane resin in water-absorbing dispersion, formed by dispersing water-absorbing resin in polyol.

DC A25 A96 P73 Q43

PA (SANN) SANYO CHEM IND LTD

CYC 1

PI JP 2001323155 A 20011120 (200257)* 13

ADT JP 2001323155 A JP 2000-139055 20000511

PRAI JP 2000-139055 20000511

AB JP2001323155 A UPAB: 20020906

NOVELTY - The material comprises a humidity controlling agent containing a urethane resin (U) formed by reacting a polyol (A) and a polyisocyanate (P) in a water-absorbing dispersion (D), and an anti-microbial agent. The dispersion (D) is formed by dispersing a water absorbing resin (B) or a water-absorbing gel, formed by polymerization of the polyol (A), in (A).

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for the decorative material for furnitures, and interior material for residences.

USE - As decorative material (claimed) for interior walls, furnitures, wall paper for residences and buildings.

ADVANTAGE - The humidity control material has uniform moisture-absorbing property as the water-absorbing resin micro-particle is uniformly dispersed in urethane resin. The material has improved anti-microbial effect and moisture absorption and release velocity.

Dwg.0/0

L27 ANSWER 38 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2002-141598 [19] WPIX

DNC C2002-043813

TI Low index biodegradable **polyurethane** foam, for floral supports, comprises product of an isocyanate, an active hydrogen-containing component at least partly from a natural renewable source, a catalyst, a surfactant, and a blowing agent.

DC A25 A97

IN FRISCH, K C; KELLY, P T; SENDIJAREVIC, V

PA (SMIT-N) SMITHERS OASIS CO

CYC 26

PI EP 1162222 A2 20011212 (200219)* EN 13

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI TR

ADT EP 1162222 A2 EP 2001-112197 20010518

PRAI US 2000-590413 20000608

AB EP 1162222 A UPAB: 20020321

NOVELTY - A low index **polyurethane** foam that is at least partially biodegradable, comprises the reaction product of an isocyanate, an active hydrogen-containing component, a catalyst, a surfactant, and a blowing agent. The active hydrogen-containing component comprises a component derived from a natural, renewable component, and a component derived from a petrochemical source.

DETAILED DESCRIPTION - A low index **polyurethane** foam that is at least partially biodegradable, comprises the reaction product of:

(a) 10-35 weight% of an isocyanate;

(b) 65-90 weight% of an active hydrogen-containing component comprising:

(i) 80-100 weight% of a component derived from a natural, renewable component; and

(ii) 0-20 weight% of a component derived from a petrochemical source;

(c) 0.5-1 weight% of a catalyst;

(d) 0.3-3 weight% of a surfactant; and

(e) 0.5-20 weight% of a blowing agent.

USE - The foam can be used as a floral support (e.g. as a floral foam for fresh flower arrangements or a floral foam for dried or silk flower arrangements), and as a growing media, as well as a variety of other non-related applications such as an insulation foam in applications where significant **microbial** attack is not likely during the useful life of the product.

ADVANTAGE - The thermoset foam is at least partially biodegradable and/or compostible, and may be fully biodegradable. It does not produce or release any toxic components during it's use and subsequent biodegradation. The foam is made with environmentally friendly blowing

agents, and has physical properties including rigidity, crispness, density, and hydrophilicity. It may be made semi-rigid or flexible.
Dwg.0/3

L27 ANSWER 39 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2002-091639 [13] WPIX
DNC C2002-028482
TI Cosmetic composition for use for, e.g., face powder comprises powder phase and aqueous phase binder comprising cubic or lamellar liquid crystals.
DC A96 D21 E19 P24
IN HADASCH, A; LEMANN, P; SIMONNET, J; SIMONNET, J T
PA (OREA) L'OREAL SA; (HADA-I) HADASCH A; (LEMA-I) LEMANN P; (SIMO-I) SIMONNET J
CYC 30
PI EP 1155676 A2 20011121 (200213)* FR 21
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI TR
FR 2808999 A1 20011123 (200213)
JP 2002020236 A 20020123 (200222) 17
US 2002041854 A1 20020411 (200227)
CN 1331967 A 20020123 (200231)
KR 2001105288 A 20011128 (200233)
ADT EP 1155676 A2 EP 2001-401249 20010515; FR 2808999 A1 FR 2000-6448
20000519; JP 2002020236 A JP 2001-148415 20010517; US 2002041854 A1 US
2001-860567 20010521; CN 1331967 A CN 2001-122173 20010518; KR 2001105288
A KR 2001-27412 20010518
PRAI FR 2000-6448 20000519
AB EP 1155676 A UPAB: 20020226
NOVELTY - A cosmetic composition comprising a powder phase and a binder in which the binder phase is a continuous aqueous phase composition
DETAILED DESCRIPTION - The binder is a water in oil emulsion stabilized by one or more organized systems, which are lyotropic liquid crystals, either cubic or lamellar liquid crystals or mixtures of them.
INDEPENDENT CLAIMS are included for the use of one or more continuous aqueous phases in a make-up and/or care product in powder form to improve the hydration conferred by the composition and for such use to improve the development of color within the composition.
USE - The composition is used as eyeshadow, blusher, face and body powder, anti- wrinkle, foundation or body makeup(claimed).
ADVANTAGE - The composition gives improved freshness and care of the skin because it contains an aqueous phase, but it is, at the same time, possible to include in it hydrophilic active ingredients
Dwg.0/0

L27 ANSWER 40 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2000-475636 [41] WPIX
DNN N2000-354863 DNC C2000-142519
TI Disposable applicators, used to dispense bioactive materials and adhesives to biological sites, and industrial and home application materials, include e.g. frangible ampoule, flexible applicator body..
DC A96 B07 P34
IN BADEJO, I T; BAREFOOT, J B; COTTER, W M; D'ALESSIO, K R; HEDGPETH, D L; MAINWARING, L H; NARANG, U; SHERBONDY, A; SZABO, G N
PA (CLOS-N) CLOSURE MEDICAL CORP
CYC 85
PI WO 2000038777 A1 20000706 (200041)* EN 60
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL
OA PT SD SE SL SZ TZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD

GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV
MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT
UA UG UZ VN YU ZW

AU 2000023764 A 20000731 (200050)
US 6283933 B1 20010904 (200154)
US 6595940 B1 20030722 (200354)

ADT WO 2000038777 A1 WO 1999-US30542 19991222; AU 2000023764 A AU 2000-23764
19991222; US 6283933 B1 US 1998-219851 19981223; US 6595940 B1 CIP of US
1998-219851 19981223, US 1999-430290 19991029

FDT AU 2000023764 A Based on WO 2000038777; US 6595940 B1 CIP of US 6283933

PRAI US 1999-430290 19991029; US 1998-219851 19981223

AB WO 200038777 A UPAB: 20000831

NOVELTY - Disposable applicators for dispensing and applying materials.

DETAILED DESCRIPTION - Disposable applicators for dispensing and applying materials comprise:

(a) a frangible ampoule containing a predetermined quantity of dispensable material with a 1st closed end and a 2nd frangibly sealed end;

(b) a flexible applicator body with a hollow main applicator body portion with a sealed proximal end and a secondary applicator body portion with an open distal end, the main applicator body portion being of a length and circumference sized to receive (a), and the second frangibly sealed end of the ampoule being positioned facing the secondary applicator body portion of the applicator;

(c) retaining means for retaining the ampoule substantially within the applicator body;

(d) a 1st swab attached to the proximal end of the main applicator body portion; and

(e) a 2nd swab attached to and in fluid communication with the distal end of the secondary applicator body portion; (a) being frangible at the frangibly sealed end by application of a sufficient force applied to the ampoule through the applicator body to allow flow of the dispensable material toward the 2nd swab.

INDEPENDENT CLAIMS are also included for:

(1) methods of making disposable applicators;

(2) methods of treating tissue; and

(3) kits comprising saleable packages containing disposable applicators.

USE - The applicators are used to treat tissues (claimed). The applicators are used to apply therapeutic or otherwise biomedically useful liquid compositions to surfaces such as biological tissues. They may be used to deliver bioactive materials to biological sites including medicaments, such as antibiotics, **antimicrobials**, antiseptics, bacteriocins, bacteriostats, disinfectants, steroids, anesthetics, antifungals, antiinflammatories, antibacterials, antivirals, anti-tumor agents, growth promoters and/or wound-healing promoters (**quaternary ammonium** halides such as benzalkonium chloride and benzethonium chloride, chlorhexidine sulfate, gentamicin sulfate, hydrogen peroxide, quinolone thioureas, silver salts such as silver acetate, silver benzoate, silver carbonate, silver chloride, silver citrate, silver iodide, silver nitrate and silver sulfate, copper compounds, such as copper chloride, copper sulfate and copper peptides, sodium hypochlorite, sulfadiazine salts including silver, sodium and zinc salts, and/or antioxidants such as vitamins e.g. vitamin E, and adhesives for absorbable and non-absorbable biomedical applications such as tissue adhesives, sealants for preventing bleeding or for covering open wounds, apposing surgically incised or traumatically lacerated tissues, retarding blood flow from wounds, drug delivery, dressing burns, dressing skin or other superficial or surface wounds (abrasions, chaffed or raw skin and/or stomatitis), hernia repair, meniscus repair, and aiding repair and

regrowth of living tissue, and in industrial and home applications such as in bonding rubbers, plastics, wood, composites, fabrics and other natural and synthetic materials. They may be used to treat tissues to promote wound healing of leg ulcers and thermal burns, and to apply compositions to stomatitis lesions including inflammation of mucous tissue of the oral cavity such as lesions and sores as well as to skin wounds such as minor cuts, scrapes, irritations, compromised skin, superficial lacerations, burns or abrasions, or sores on mucous membranes.

ADVANTAGE - The applicators can be used by a person, such as a patient, to apply biomedically useful compositions conveniently, inexpensively and effectively. They are designed for simple and effective delivery of liquid compositions and for single-handed use by a person with average strength, and require little or no instruction prior to use. The applicators are designed to be simple in construction and use, have no moving parts and require no special disposal procedures. Application of biomedically useful compositions within the applicators does not need to be supervised by a medical professional, but can be performed by the user in an environment and at a time chosen by the user.

DESCRIPTION OF DRAWING(S) - Top view of the applicator.

main body portion 24
secondary body portion 26
frangible ampoule 30
applicator swab 50
dry wiping swab 60

Dwg.10/11

L27 ANSWER 41 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2000-246480 [21] WPIX
DNN N2000-184367 DNC C2000-074559
TI New multi-layer medical island dressing providing **antimicrobial**
protection comprising an absorbent assembly and an outer layer.
DC A96 B05 D22 E14 P32 P34
IN DOBOS, J A; MABRY, R D
PA (MEDW-N) MEDWRAP CORP
CYC 88
PI WO 2000010387 A1 20000302 (200021)* EN 31
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL
OA PT SD SE SL SZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK EE ES FI
GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT
LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM
TR TT UA UG UZ VN YU ZA ZW
AU 9953920 A 20000314 (200031)
US 6168800 B1 20010102 (200103)
EP 1104989 A1 20010613 (200134) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI
BR 9913095 A 20011002 (200167)
AU 757793 B 20030306 (200324)
CA 2341027 C 20050111 (200506) EN
EP 1104989 B1 20050223 (200516) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI
DE 69923846 E 20050331 (200523)
ADT WO 2000010387 A1 WO 1999-US17533 19990803; AU 9953920 A AU 1999-53920
19990803; US 6168800 B1 US 1998-137040 19980820; EP 1104989 A1 EP
1999-939672 19990803, WO 1999-US17533 19990803; BR 9913095 A BR 1999-13095
19990803, WO 1999-US17533 19990803; AU 757793 B AU 1999-53920 19990803; CA
2341027 C CA 1999-2341027 19990803, WO 1999-US17533 19990803; EP 1104989

B1 EP 1999-939672 19990803, WO 1999-US17533 19990803; DE 69923846 E DE 1999-623846 19990803, EP 1999-939672 19990803, WO 1999-US17533 19990803
 FDT AU 9953920 A Based on WO 2000010387; EP 1104989 A1 Based on WO 2000010387; BR 9913095 A Based on WO 2000010387; AU 757793 B Previous Publ. AU 9953920, Based on WO 2000010387; CA 2341027 C Based on WO 2000010387; EP 1104989 B1 Based on WO 2000010387; DE 69923846 E Based on EP 1104989, Based on WO 2000010387

PRAI US 1998-137040 19980820

AB WO 200010387 A UPAB: 20000502

NOVELTY - A new multi-layer medical island dressing (I) providing antimicrobial protection comprising an inner absorbent layer and an outer semi-permeable layer, is new.

DETAILED DESCRIPTION - (I) further comprises;

(a) an absorbent assembly comprising;

(i) a porous flexible polymeric film impregnated with an antimicrobial agent and a wound contacting side and a non-wound contacting side;

(ii) a continuous semipermeable polymeric film, joined to the non-wound contacting side of (i) to form a sealed interior reservoir compartment; and

(iii) an absorbent material for retaining wound exudate within the sealed interior reservoir compartment; and

(b) an outer layer comprising a gas permeable continuous polymeric film and has a bottom surface for contacting an area round the wound adjacent to the second layer of the absorbent assembly and extending beyond it, and a top surface. At least a portion of the bottom surface is coated with an adhesive material for adhering to the area round the wound.

ACTIVITY - Antimicrobial.

MECHANISM OF ACTION - None given.

USE - The dressing is useful in wound management.

DESCRIPTION OF DRAWING(S) - The figure shows a bottom view of a multi-layer island dressing (10) comprising an inner absorbent assembly and an outer layer (14). The inner absorbent assembly comprises a non-absorbent, non-adhering porous polymeric film first layer (16), a liquid impermeable, gas permeable continuous polymeric second layer (18), a fluid reservoir formed by the joining of the first layer to the second layer and an absorbent material layer (20) positioned in the fluid reservoir. The outer layer (14) comprises a gas permeable continuous polymeric film which extends beyond the margins of the absorbent assembly and provides an adhesive surface for adhering to the wound area.

Dwg.1/12

L27 ANSWER 42 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2000-256158 [22] WPIX

DNC C2000-078123

TI New amide derivatives of hyaluronic useful, e.g. in coating medical devices such as catheters or syringes exhibit widely varying water-solubility, viscosity and amide bond stability.

DC All A96 B04 B07

IN BELLINI, D; TOPAI, A

PA (FIDI-N) FIDIA ADVANCED BIOPOLYMERS SRL

CYC 87

PI WO 2000001733 A1 20000113 (200022)* EN 36

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL
 OA PT SD SE SL SZ UG ZW

W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB
 GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU
 LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR
 TT UA UG US UZ VN YU ZA ZW

AU 9946397 A 20000124 (200027)
 EP 1095064 A1 20010502 (200125) EN
 R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
 RO SE SI

IT 1300287 B 20000503 (200206)
 JP 2002519481 W 20020702 (200246) 51
 AU 761986 B 20030612 (200349)

ADT WO 2000001733 A1 WO 1999-IB1254 19990706; AU 9946397 A AU 1999-46397
 19990706; EP 1095064 A1 EP 1999-929619 19990706; WO 1999-IB1254 19990706;
 IT 1300287 B IT 1998-PD169 19980706; JP 2002519481 W WO 1999-IB1254
 19990706; JP 2000-558133 19990706; AU 761986 B AU 1999-46397 19990706
 FDT AU 9946397 A Based on WO 2000001733; EP 1095064 A1 Based on WO 2000001733;
 JP 2002519481 W Based on WO 2000001733; AU 761986 B Previous Publ. AU
 9946397, Based on WO 2000001733

PRAI IT 1998-PD169 19980706
 AB WO 200001733 A UPAB: 20000508

NOVELTY - Amide derivatives of hyaluronic acid (HA), which include at least one repetitive unit of formula (I), are new.

DETAILED DESCRIPTION - Amide derivatives of HA (or of derivatives of HA), which comprise at least one repetitive unit of formula (I), are new.

R = NR₆R₇, OH, O-, an alcoholic group of the aliphatic, aromatic, heterocyclic, cycloaliphatic or arylaliphatic series, an alcoholic group of HA; or an amino group of deacylated HA;

R₁-R₄ = H, SO₃-, an acyl group derived from a carboxylic acid of the aliphatic, aromatic, arylaliphatic, cycloaliphatic or heterocyclic series, or CO-(CH₂)₂-COOY;

Y = H or a negative charge;

R₅ = COMe, H, SO₃-, an acyl group derived from a carboxylic acid of the aliphatic, aromatic, arylaliphatic, cycloaliphatic or heterocyclic series, or an acyl group of HA;

R₆, R₇ = H, or an optionally substituted aliphatic, aromatic, arylaliphatic, cycloaliphatic or heterocyclic group.

Provided that at least one of R and R₅ forms an amide group.

INDEPENDENT CLAIMS are included for the following:

(A) use of amidic, water-soluble compounds, which are obtained by reaction of the carboxylic groups of HA with an amino group of the aliphatic, aromatic, arylaliphatic, cycloaliphatic or heterocyclic series, in ophthalmology and in ophthalmic surgery;

(B) pharmaceutical compositions containing the amidic compounds described above, and salts of these, alone or in association with one another or with other pharmacologically active substances;

(C) biomaterials constituted by amidic compounds (and salts of these) as described above, alone or in association with one another or with other natural, semisynthetic or synthetic polymers and, optionally, other biologically active substances.

ACTIVITY - None given.

MECHANISM OF ACTION - None given.

USE - Biomaterials containing the new amide derivatives are useful for preparation of scaffolds for cell cultures, or for preparation of surgical, cosmetic or health care articles (e.g. guide channels, gauzes, threads, gels, hydrogels, tampons, films, membranes, sponges, non-woven fabrics, microspheres or nanospheres) for used in, e.g. surgery, hemodialysis, cardiology, dermatology, ophthalmology, otorhinolaryngology, dentistry, orthopedics, gynecology, urology or extra-corporeal blood circulation. The biomaterials may be used, e.g. for protection of cardiac valves, for prevention of post-surgical adhesions, or for prevention of hypertrophic scarring. The amides, or biomaterials containing them, can be used in coating of medical or other devices, e.g. catheters, artificial tendons, bone prostheses, contact lenses, blood oxygenators, artificial

kidneys, artificial hearts, blood bags, syringes, filtration systems, culture containers, or supports for peptides, proteins and antibodies. The amides may be used, in association with radioactive or non-radioactive substances, in contrast systems for in vivo diagnosis and therapy of tumors or damaged tissues. They may also be used for transport and release of drugs and for transfection of cells.

ADVANTAGE - The amides can be either water-soluble or water-insoluble, according to the acid, the amine, the percentage of amide bonds or the derivative of HA used to prepare the amide. They can thus be used for a large number of applications according to their on their solubility in water, their viscosity and the stability of the amide bond.
Dwg.0/3

L27 ANSWER 43 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2000-136890 [12] WPIX
DNN N2000-102354 DNC C2000-041962
TI New three dimensional prosthesis in shape of body part useful for reconstruction of human or animal body parts including nose, nasal septum, pharynx and joints.
DC A11 A14 A28 A96 B07 D16 D22 P32 P34
IN CALLEGARO, L; PASTORELLO, A; RADICE, M
PA (FIDI-N) FIDIA ADVANCED BIOPOLYMERS SRL
CYC 87
PI WO 9965534 A1 19991223 (200012)* EN 24
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL
OA PT SD SE SL SZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB
GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU
LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR
TT UA UG US UZ VN YU ZA ZW
AU 9946115 A 20000105 (200024)
EP 1087797 A1 20010404 (200120) EN
R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU NL PT SE
IT 1300270 B 20000503 (200206)
JP 2002518101 W 20020625 (200243) 29
AU 761325 B 20030605 (200341)
US 6642213 B1 20031104 (200374)
ADT WO 9965534 A1 WO 1999-EP4167 19990616; AU 9946115 A AU 1999-46115
19990616; EP 1087797 A1 EP 1999-929241 19990616; WO 1999-EP4167 19990616;
IT 1300270 B IT 1998-PD149 19980617; JP 2002518101 W WO 1999-EP4167
19990616; JP 2000-554411 19990616; AU 761325 B AU 1999-46115 19990616; US
6642213 B1 WO 1999-EP4167 19990616, US 2000-719200 20001208
FDT AU 9946115 A Based on WO 9965534; EP 1087797 A1 Based on WO 9965534; JP
2002518101 W Based on WO 9965534; AU 761325 B Previous Publ. AU 9946115,
Based on WO 9965534; US 6642213 B1 Based on WO 9965534
PRAI IT 1998-PD149 19980617
AB WO 9965534 A UPAB: 20030919
NOVELTY - A three dimensional (3D) prosthesis (I) in a body part shape
comprises at least one 3D matrix with an essentially fibrous or porous
structure, containing at least one hyaluronic acid derivative. The
prosthesis contains at least two of the 3D matrixes, one incorporates
and/or is adhered to the other matrices and optionally incorporates and/or
adheres to a bidimensional perforated matrix.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the
following:
(1) a process for the preparation of a 3D prosthesis where the matrix
is a 3D matrix with an essentially fibrous structure and incorporates a
porous 3D matrix and comprises:
(a) lining a mold with a layer of nonwoven tissue comprising a

hyaluronic acid derivative;

(b) impregnating the non woven tissue in the mold with an aqueous solution of a **quaternary ammonium** salt of hyaluronic acid or a hyaluronic acid derivative;

(c) freeze-drying the content of the mold therefore obtaining a prostheses having a matrix A1 incorporating the matrix B consisting of the ammonium salts;

(d) optionally converting the ammonium salt contained in the prostheses coming from step (c) into a hyaluronic acid; and

(e) freeze-drying the product from (c); and

(2) a process for preparing (I) where the matrix is an essentially porous 3D matrix or is the product of step (c) or (d) of (1) and is adhered to an essentially fibrous 3D matrix comprising:

(a) applying a thin layer of a solution of a hyaluronic acid derivative in a suitable aqueous or organic solvent;

(b) applying to the freeze-dried product from (a) a non-woven tissue comprising a hyaluronic acid derivative; and

(c) freeze-drying the product of (b).

USE - The three dimensional prosthesis (I) is useful for reconstruction of human or animal body parts e.g. nose, nasal septum, pharynx, larynx, joints, bone structures, eye socket, cardiac valves, blood vessels, nipple, navel, internal organs and their parts, the secondary sexual organs or especially auricula, knuckles or temporomandibular joint. (I) is useful in general, internal, otorhinolaryngological, plastic, aesthetic, oncological, orthopaedic, cardiovascular, gynecological and abdominal surgery and neurosurgery (all claimed). (I) is useful for acting as scaffolds for cell cultures. (I) is useful for the reconstruction of human or animal parts which have been damaged or are missing following trauma or as a result of congenital defects.

ADVANTAGE - The three dimensional prosthesis (I) is made easily into any form, however complex and according to the chemical structure of the hyaluronic acid derivative used and according to the degree of esterification have the advantage of having tensile strength and degradation times that can be adjusted according to the requirement of the area to be reconstructed.

Dwg.0/0

L27 ANSWER 44 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 1999-478782 [40] WPIX
 CR 2003-605485 [57]
 DNN N1999-356459 DNC C1999-140809
 TI Imparting long lasting **antimicrobial** properties to a polymeric substrate, e.g. catheter, by forming interpenetrating polymer network by polymerizing **quaternary ammonium** salt.
 DC A26 A28 A32 A96 B04 B07 D22 E11 E19 G02 P34 P42
 IN MEIER, J F; MERKER, R L; MORGAN, H C
 PA (BIOS-N) BIOSAFE INC; (MEIE-I) MEIER J F; (MERK-I) MERKER R L; (MORG-I) MORGAN H C
 CYC 24
 PI WO 9932157 A2 19990701 (199940)* EN 27
 RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
 W: CA CN JP MX
 EP 1042005 A2 20001011 (200052) EN
 R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
 US 6146688 A 20001114 (200060)
 CN 1284000 A 20010214 (200130)
 JP 2001526310 W 20011218 (200203) 27
 MX 2000006262 A1 20030801 (200464)

ADT WO 9932157 A2 WO 1998-US27330 19981218; EP 1042005 A2 EP 1998-964240 19981218, WO 1998-US27330 19981218; US 6146688 A US 1997-996749 19971223; CN 1284000 A CN 1998-813242 19981218; JP 2001526310 W WO 1998-US27330 19981218, JP 2000-525147 19981218; MX 2000006262 A1 WO 1998-US27330 19981218, MX 2000-6262 20000623

FDT EP 1042005 A2 Based on WO 9932157; JP 2001526310 W Based on WO 9932157; MX 2000006262 A1 Based on WO 9932157

PRAI US 1997-996749 19971223

AB WO 9932157 A UPAB: 20041006

NOVELTY - A method for imparting **antimicrobial** properties to a polymeric substrate comprises contacting a polymerizable or monomeric **quaternary ammonium** salt (I) in a solvent with the substrate and polymerizing adsorbed (I) to form an interpenetrating network. The method can be more generally used to form **antimicrobial** coatings on any substrates having interstices in which (I) can be adsorbed.

ACTIVITY - **Antimicrobial**; bactericidal; fungicidal.

Polyurethane catheters treated as above using an unspecified **quaternary ammonium** salt inhibited growth of *Staphylococcus epidermidis* ATCC 12228, *Candida albicans* ATCC 10231 and *Staphylococcus aureus* ATCC 33591 (methicillin resistant).

MECHANISM OF ACTION - None given.

USE - For creating non-leaching, biocompatible, **antimicrobial** polymeric coatings on substrates (especially polymers but also e.g. metals or wood). The process is specifically used to produce catheters having non-leaching **antimicrobial** properties (claimed), but may be applied to textile materials and other medical devices and supplies. The treated products can kill bacteria, fungi and molds.

ADVANTAGE - The surface has long lasting, leaching resistant **antimicrobial** properties which are not dependent on antibiotic drugs.

Dwg.0/0

L27 ANSWER 45 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2000-225013 [20] WPIX

CR 2000-183516 [17]; 2000-195930 [18]; 2000-195931 [18]; 2000-238125 [21]; 2001-243214 [25]; 2001-353024 [37]; 2001-456391 [49]; 2002-074562 [10]; 2002-113293 [15]; 2003-567204 [53]

DNN N2000-168574 DNC C2000-068888

TI Textile based bedding article for a domestic animal, has **microbe** inhibiting agent applied to at least one of the outer textile casing, or the inner filling.

DC A96 D22 E19 P14

IN DENESUK, M; HINGST, E; SMITH, M; UHLMANN, E V

PA (SEEF-N) SEEFAR TECHNOLOGIES INC

CYC 1

PI CA 2238154 A1 19991014 (200020)* EN 66

ADT CA 2238154 A1 CA 1998-2238154 19980623

PRAI US 1998-59893 19980414

AB CA 2238154 A UPAB: 20030820

NOVELTY - The bedding article has an outer textile casing, and inner filling and at least one of them has an effective **microbe** -inhibiting agent or property. The outer casing is made from fiber selected from acrylics, polyester, nylon, olefin polymers, triacetate polymers, rubber, denim, vinyl and spandex. The inner filling comprises at least one of a foam, a particulate, and a fibrous filling. The inner fibrous filling is selected from a polyolefin, acrylic, nylon, polyester, **polyurethane**, polyethylene terephthalate, cellulose acetate, triacetate resin fibers, and their blends.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a process of imparting **microbe**-inhibiting properties to a pet bed.

Preferred Features: The **microbe** inhibiting agent comprises a **microbe**-cidal agent selected from the group: heavy metal salts, halogenated dioxides, **quaternary ammonium** compounds, halogenated compounds, sulfur compounds, phenyl derivatives, phenoxy derivatives, thiazoles chlorinated phenolic compounds, poly-substituted immine salts and phosphated esters, and their mixtures. Preferably, the **microbe**-cidal agent is chlorine dioxide, or may be 2,4,4'-trichloro-2'-hydroxydiphenol. The fibrous filling is compacted at least 14 %, and the **microbe**-cidal agent is added into a portion of the fibers during the spinning step.

USE - For animal pets.

ADVANTAGE - Bedding article is **microbe**-inhibiting in nature, promotes good hygiene, is economical to manufacture, and is usable in the normal manner by pets.

DESCRIPTION OF DRAWING(S) - The figure shows a perspective view of the bedding article.

bedding article 10

outer cover 12

endless clasp fastener 20

Dwg.1/6

L27 ANSWER 46 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 2000-183516 [17] WPIX
 CR 2000-195930 [18]; 2000-195931 [18]; 2000-225013 [20]; 2000-238125 [21];
 2001-243214 [25]; 2001-353024 [37]; 2001-456391 [49]; 2002-074562 [10];
 2002-113293 [15]; 2003-567204 [53]
 DNN N2000-135372 DNC C2000-057686
 TI Amusement article for domestic animal with **microbe**-inhibiting
 properties, has **microbe** inhibiting agent applied to at least one
 of the outer textile casing and the inner filling.
 DC A96 D22 E19 P14
 IN DENESUK, M; UHLMANN, E V
 PA (SEEF-N) SEEFAR TECHNOLOGIES INC
 CYC 1
 PI CA 2238115 A1 19991014 (200017)* EN 69
 ADT CA 2238115 A1 CA 1998-2238115 19980623
 PRAI US 1998-59826 19980414
 AB CA 2238115 A UPAB: 20030820

NOVELTY - The article has an outer textile casing formed of a tough chew resistant material defining a shape in the form of a small article for luring or being fetched by a domestic animal, and an inner filling. At least one of the outer textile casing and the inner filling have an effective **microbe** inhibiting agent. The outer casing is made from fiber selected from the group; acrylics, polyester, nylon, olefin, polymers, triacetate polymers, rubber and spandex. The inner filling comprises at least one of a foam, a particulate, and a fibrous filling.

DETAILED DESCRIPTION - The inner filling is fibrous, and is selected from the group of polyolefin, acrylic, nylon, polyester, **polyurethane**, polyethylene terephthalate, cellulose acetate, triacetate resin fibers and their blends. The **microbe** inhibiting agent comprises a **microbe** tidal agent selected from: heavy metal salts, halogenated dioxides, **quaternary ammonium** compounds, halogenated compounds, sulfur compounds, phenyl derivatives, phenoxy derivatives, thiazoles, chlorinated phenolic compounds, poly substituted immine salts and phosphate esters, and their mixtures. Preferably, the **microbe** cidal agent is chlorine dioxide, and may be 2,4,4'-trichloro-2'-hydroxyphenol which is incorporated into at least a

portion of the fibers in at least on of the textile casing and the fibrous filling. The micro cidal agent is present form 0.001 to 10 % by weight of the fibers in the fibrous filling. The **microbe** inhibiting fiber volume fraction in teh containment defined by the outer textile casing is between 0.3 and 4.5 %.

USE - As an article for amusement of, and retrieval by pets.

ADVANTAGE - Is safe, has a pleasant scent, and longer usable life.

DESCRIPTION OF DRAWING(S) - The figure shows the front view of the article.

Dwg.1/5

L27 ANSWER 47 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 1998-255513 [23] WPIX
 DNN N1998-201918 DNC C1998-079616
 TI Graft polymer and mouldings for medical care - is easily applied to plastic products and exhibits good **antimicrobial** performance over a long time.
 DC A14 A96 D22 P34
 IN TANAHASHI, K
 PA (TORA) TORAY IND INC; (TORA) TORAY KK
 CYC 23
 PI JP 10081717 A 19980331 (199823)* 7
 WO 9923127 A1 19990514 (199926)# JA 24
 RW: AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE
 W: CA CN KR US
 EP 952168 A1 19991027 (199950)# EN
 R: DE FR GB IT
 CN 1242781 A 20000126 (200024)#
 KR 2000069875 A 20001125 (200131)#
 US 6497868 B1 20021224 (200303)#
 TW 523522 A 20030311 (200365)
 JP 3541627 B2 20040714 (200446) 11
 ADT JP 10081717 A JP 1997-191494 19970716; WO 9923127 A1 WO 1997-JP4005 19971104; EP 952168 A1 EP 1997-909734 19971104, WO 1997-JP4005 19971104; CN 1242781 A CN 1997-181211 19971104, WO 1997-JP4005 19971104; KR 2000069875 A WO 1997-JP4005 19971104, KR 1999-706068 19990703; US 6497868 B1 Cont of WO 1997-JP4005 19971104, US 1999-343401 19990630; TW 523522 A TW 1997-116161 19971030; JP 3541627 B2 JP 1997-191494 19970716
 FDT EP 952168 A1 Based on WO 9923127; KR 2000069875 A Based on WO 9923127; JP 3541627 B2 Previous Publ. JP 10081717
 PRAI JP 1996-186004 19960716; WO 1997-JP4005 19971104;
 EP 1997-909734 19971104; CN 1997-181211 19971104;
 KR 1999-706068 19990703; US 1999-343401 19990630
 AB JP 10081717 A UPAB: 19980610
 Graft polymer contains a constitutional unit containing **quat**. **ammonium** gps. of formula -N+(R2)(R3)-R4 . X- (I) graft polymerised, where R2, R3 = 1-3C alkyl, R4 = 3-18C alkyl, and X = at least one selected from halo, SO4, OH and COO.
 Also claimed is a moulding for medical care comprising a moulding for inserting into body coated with the graft polymer.
 The graft polymer contains a constitutional unit containing formula (II)
 -CH2-C(-R1)(-)-CO-A-(CH2)nN+(R2)(R3).X- (II)
 where R1 = H, CH3 or C2H5, n = 1-12, A = O, S or NR5 and R5 = H or 1-12C alkyl,
 or formula (III)
 -CH2-C(-R1)(-)-CO-A-(CH2CH2O)nR2 (III)
 where n = 1-100; R2 = H, CH3 or C2H5.
 The moulding is made of **polyurethane**, natural rubber, silicone resin, polyamide or synthetic rubber. The molding is a catheter,

a tube, a stent, a cuff, a tube connector, an access port, a drainage back, an endoscope cover or a blood circuit.

ADVANTAGE - The graft polymer is easily applied to plastic products and exhibits good **antimicrobial** performance over a long time, even if bacteria are in high concentration and is harmless to human body. Dwg.0/0

L27 ANSWER 48 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1992-056243 [07] WPIX

DNC C1992-025320

TI Biocidally active surface coating compsn. - comprising polyether, polyester, polycarbonate, **polyurethane** or alkyd resins, containing active **microbial quat. ammonium** gp. bonded to backbone.

DC A82 D22 E14 E16 G02

IN STOVICEK, P

PA (STOV-I) STOVICEK P

CYC 2

PI US 5084096 A 19920128 (199207)*

CA 1316623 C 19930420 (199321)

ADT CA 1316623 C CA 1989-595836 19890406

PRAI CA 1989-595836 19890406

AB US 5084096 A UPAB: 19931006

A compsn. comprises polyether resins, polyester resins, polycarbonate resins, **polyurethane** resins or alkyd resins, which contain directly bonded to their backbone repeating side chains of an active **microbiocidal quat. ammonium** radical of formula (I): In (I) R1, R2 and R3 = opt. substd. 1-20C alkyl gps., aryl gps., or mixts. of these; R4 = opt. substd. 2-10C alkylene gp., directly bonded to the polymer backbone; and X(-) = anionic gp. selected from Cl(-), Br(-), I(-) OH(-) or HSO4(-).

USE/ADVANTAGE - The compsns. have excellent resistance to attack by algae, fungi, and other microorganisms and has high activity against deposition of biota. The active chemical is not removed from the surfaces even after repeated washing with water. Useful for coating equipment to be submerged in the sea e.g. fish farming nets, boat hulls and floats. It is also used as self-disinfectants in hospitals, air-conditioning units and ducts.

0/0

L27 ANSWER 49 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1993-001039 [01] WPIX

DNN N1993-000639 DNC C1993-000407

TI Impregnating **polyurethane** with **antimicrobial** cpd. - by contacting device with solution containing cpd. in specific hydrocarbon solvent, then removing the solvent.

DC A25 A96 D22 E19 P34

IN LAUFER, J K

PA (BRTO) BOC HEALTH CARE INC

CYC 15

PI EP 520160 A1 19921230 (199301)* EN 11

R: AT BE CH DE DK ES FR GB IT LI LU NL PT SE

CA 2068168 A 19921229 (199311)

ADT EP 520160 A1 EP 1992-107452 19920430; CA 2068168 A CA 1992-2068168 19920511

PRAI US 1991-722784 19910628

AB EP 520160 A UPAB: 19931118

Impregnating a preformed **polyurethane** medical device with an

antimicrobial quaternary ammonium cpd.

comprises; (A) contacting device with a solution containing the cpd. in a chlorinated or fluorinated hydrocarbon solvent thereby impregnating the device; and (B) removing the solvent. The **antimicrobial** cpd. is of formula (I) or their optically isomeric forms. (where R1, R2, R3, R4 = 1-20C alkyl; alternatively R1, R2, R3 = 1-20C alkyl and R4 = aryl alkyl, chloroaryl alkyl, aryloxy alkyl or trialkyl ammonium alkyl; alternatively R1, R2 = 1-20C alkyl and R3, R4 = aryl alkyl, monoalkylaryloxy alkyleneoxy alkyl or dialkylaryloxy alkyleneoxy alkyl. Alternatively R1 = 1-20C alkyl and R2, R3, R4 along with the N-atom form a heterocyclic ring; X- = halogen). Also claimed is the medical device impregnated with the **antimicrobial** cpd..

The **antimicrobial** cpd. is pref. selected from (9 specified): e.g. octadecyl trimethyl ammonium; dimethyl cis-9-octadecenyl- 9,12,15- octadectrienyl ammonium; benzalkonium (a mixture of alkyl dimethyl benzyl ammonium cpds.). (Especially a mixture of benzalkonium chlorides). The chlorinated or fluorinated hydrocarbon solvent is selected from dichloromethane, 1,2-dichloroethane and/or 1,1,1-trichloroethane. (especially CH2Cl2). The **antimicrobial** cpd. is present in the solvent pref. in an amount of 0.001-5 (especially 0.1-1)weight%. The medical device is

washed

with a chlorofluorohydrocarbon solvent to remove waxy material prior to contacting with the impregnating solution.

USE/ADVANTAGE - The **polyurethane** device is selected from intravenous and urinary catheters, test probes, peristaltic pump chambers, implant materials, arteriovenous shunts, gastroenteric feed tubes, film for burn and wound dressings, sponges for wound cleansing and condoms. The medical devices release **antimicrobial** agents slowly over a prolonged period under typical usage conditions (over 1 week or longer).

0/0

Dwg.0/0

L27 ANSWER 50 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 1991-134860 [19] WPIX
 CR 1992-056638 [07]
 DNN N1991-103615 DNC C1991-058082
 TI Antithrombogenic and/or **antimicrobial** compsn. - comprises
 heparin and/or antibiotics reacted with **quat. ammonium**
 cpds. or other ionic surfactants and bound with water-insoluble polymers.
 DC A96 B04 B05 D22 P34
 IN MANGAN, M A; WHITBOURNE, R J
 PA (STER-N) STERILIZATION TECH SERVICES INC; (STSB-N) STS BIOPOLYMERS INC;
 (WHIT-I) WHITBOURNE R J
 CYC 17
 PI EP 426486 A 19910508 (199119)*
 R: AT BE CH DE ES FR GB GR IT LI LU NL SE
 CA 2028069 A 19910503 (199136)
 US 5069899 A 19911203 (199151)
 EP 426486 A3 19921125 (199343)
 EP 426486 B1 19970122 (199709) EN 21
 R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
 DE 69029786 E 19970306 (199715)
 ES 2099087 T3 19970516 (199727)
 CA 2028069 C 20010220 (200113) EN
 IE 81577 B 20010307 (200160)#
 CA 2087102 C 20020423 (200231) EN
 IE 83173 B 20031126 (200382)#
 ADT EP 426486 A EP 1990-312021 19901102; US 5069899 A US 1989-430340 19891102;
 EP 426486 A3 EP 1990-312021 19901102; EP 426486 B1 EP 1990-312021

19901102; DE 69029786 E DE 1990-629786 19901102, EP 1990-312021 19901102;
 ES 2099087 T3 EP 1990-312021 19901102; CA 2028069 C CA 1990-2028069
 19901019; IE 81577 B IE 1990-4457 19901210; CA 2087102 C CA 1991-2087102
 19910502, WO 1991-US2868 19910502; IE 83173 B IE 1991-1473 19910501
 FDT DE 69029786 E Based on EP 426486; ES 2099087 T3 Based on EP 426486; CA
 2087102 C Based on WO 9200747
 PRAI US 1990-551924 19900712; US 1989-430340 19891102;
 IE 1990-4457 19901210; US 1991-662452 19910228;
 IE 1991-1473 19910501
 AB EP 426486 A UPAB: 20031223

A compsn. comprises a mixture of a first component comprising at least one of: (a) heparin reacted with a **quaternary ammonium** cpd.; (b) an ionic antibiotic agent reacted with an ionic organic surfactant or ionic macromolecule; (c) an ionic pharmaceutical agent reacted with an ionic organic surfactant or ionic macromolecule; and a second component comprising a water-insoluble polymer.

Also claimed are methods of forming a coating on the surface of: (i) a medical device to be brought into contact with human or animal body or fluids, and (ii) a water-insoluble polymer. The methods comprise forming a coating solution comprising a compsn. as above and a co-solvent for the first and second components; applying the coating solns. to the surface of the device or polymer; and allowing the solution to dry.

Pref. the water-soluble polymer is a cellulose ester, a **polyurethane** resin, an acrylic polymer, a condensation polymer, an aldehyde condensation polymer, a polyisocyanate, nitrocellulose, cellulose acetate butyrate, cellulose acetate propionate, an acrylic resin, a **polyurethane** resin or a polyisocyanate resin. When the first component comprises (a), the compsn. has anti-thrombotic properties and the **quaternary ammonium** cpd. is benzalfonium chloride, tridodecylmethylammonium chloride, cetylpyridinium chloride, benzyldimethylstearylammmonium chloride or benzylcetyl dimethylammmonium chloride.

USE - The compsns. may have anti-thrombogenic and/or **antimicrobial** properties. @(16pp Dwg.No.0/0)
 0/0

L27 ANSWER 51 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 1988-077690 [11] WPIX
 CR 1987-341939 [48]; 1990-014439 [02]
 DNN N1988-058942 DNC C1988-034868
 TI Waterproof, microporous **polyurethane** coated fabric - is
 water-vapour-permeable and useful as protective clothing and in the mfr.
 of tents.
 DC A25 A32 A82 A83 E19 F08 P42 P73
 IN HILL, B R; TOWERY, D R; TRIPLETT, B L; WATSON, T F
 PA (BURL) BURLINGTON IND INC; (TOWE-I) TOWERY D R
 CYC 31
 PI WO 8801570 A 19880310 (198811)* EN 36
 RW: AT BE CH DE FR GB IT LU NL OA SE
 W: AU BB BG BR DK FI HU JP KP KR LK MC MG MW NO RO SD SU US
 AU 8779687 A 19880324 (198825)
 EP 323481 A 19890712 (198928) EN
 R: AT BE CH DE FR GB IT LI LU NL SE
 US 5024875 A 19910618 (199127) 6
 EP 323481 B1 19941207 (199502) EN 15
 R: AT BE CH DE FR GB IT LI LU NL SE
 DE 3750848 G 19950119 (199508)
 KR 9510589 B1 19950920 (199847)
 ADT WO 8801570 A WO 1987-US2278 19870903; EP 323481 A EP 1987-906267 19870903;

US 5024875 A US 1986-905135 19860909; EP 323481 B1 EP 1987-906267
19870903, WO 1987-US2278 19870903; DE 3750848 G DE 1987-3750848 19870903,
EP 1987-906267 19870903, WO 1987-US2278 19870903; KR 9510589 B1 KR
1988-700482 19880503

FDT EP 323481 B1 Based on WO 8801570; DE 3750848 G Based on EP 323481, Based
on WO 8801570

PRAI US 1986-903130 19860903; US 1986-905135 19860909

AB WO 8801570 A UPAB: 19950126

A process for mfr. of a waterproof, water-vapour-permeable, microporous-
polyurethane-coated fabric is claimed comprising: (a) applying a
water-miscible, organic polar solvent solution (I) of a **polyurethane**
elastomer containing an acrylic acid thickener to a base fabric, (I) having a
viscosity of at least 0.5 Pa/s; (b) immersing the coated fabric in an aqueous
coagulation bath to extract the solvent and leave a porous
polyurethane matrix adhered to the fabric; and (c) washing and
drying the coated fabric; the final **polyurethane** coating having
a moisture vapour transmission rate of at least 800 g/sq.m/24 hr. and a
hydrostatic pressure resistance of at least 69 kPa. Opt. (I) may
additionally contain one or more of the following: (i) 0.01-10 (pref.
0.08-4.0) weight% **antimicrobial** silyl quat.
ammonium cpd.; (ii) 0.1-1.0 (pref. 0.1-0.5) weight% hindered amine UV
light stabiliser; or (iii) a flame retardant. The coated fabrics so obtd.
are also claimed.

USE/ADVANTAGE - The coated fabric can be used for protective
clothing, tents and tarpaulins. The characteristics of the coated fabric
are not changed by repeated washing.

0/0

Dwg. 0/0

L27 ANSWER 52 OF 52 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1986-312310 [48] WPIX

DNC C1986-135095

TI Ion exchangers, partic for molecular biology applications - are prepared by
reacting polymer containing 2,4,6-tri halo-sym triazine, covalently bound or
as filler, with tert, amine in anhydrous solvent.

DC A91 B04 J04

IN BENHREND, G; HUNGER, H D; ROSENTHAL, A

PA (DEAK) AKAD WISSENSCHAFTEN DDR

CYC 1

PI DD 237841 A 19860730 (198648)* 5

ADT DD 237841 A DD 1985-276760 19850529

PRAI DD 1985-276760 19850529

AB DD 237841 A UPAB: 19930922

Ion exchangers (I) are prepared by treating natural and/or synthetic polymer
containing a covalently bound 2,4,6-trihalo-s-triazine and/or a
2,4,6-trihalo-s-triazine as filler with at least one tert. amine (II) in
presence of a substantially anhydrous solvent at between -20 and +100
deg.C, for 1-180 minutes, opt. washing with solvents, water, salt solns
and/or dilute acids, and then drying.

Pref. (II) has formula R1 N(R2)R3, where R1-R3 each=unsatd. or saturated
straight or branched chain 1-25C aliphatic gp., opt. substd. by OH gps. or
gps. containing halogen, S, P and/or Si; cycloaliphatic gp; opt. substd.
aromatic gp; or heterocyclic gp. (II) is tert. cyclic amine containing at
least one N in a ring. (II) is bicyclic amine containing at least one N in
each ring. (II) is diazabicyclo-octane. At least one gp. substd. on N
bears an OH gp. Polymer is cellulose, cellulose derivative, modified
cellulose, cellulose copolymer, grafted cellulose, acrylate (co)polymer,
polyurethane, polyamide, polyimide, polysiloxane, polysulphone, or
styrene (co)polymer, as powder, granulate, fibres, short fibres, fibrous

articles, cloths, papers, fleeces sheets, hollow fibres, membranes, tubes or foams.

USE/ADVANTAGE - As quaternary ammonium ion-containing exchangers for analysis and preparation in microbiology, biochemistry, and gene technology. (I) are readily prepared, little or no hydrolysis prods are formed, (I) have high binding capacity on careful elution.

0/0